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Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

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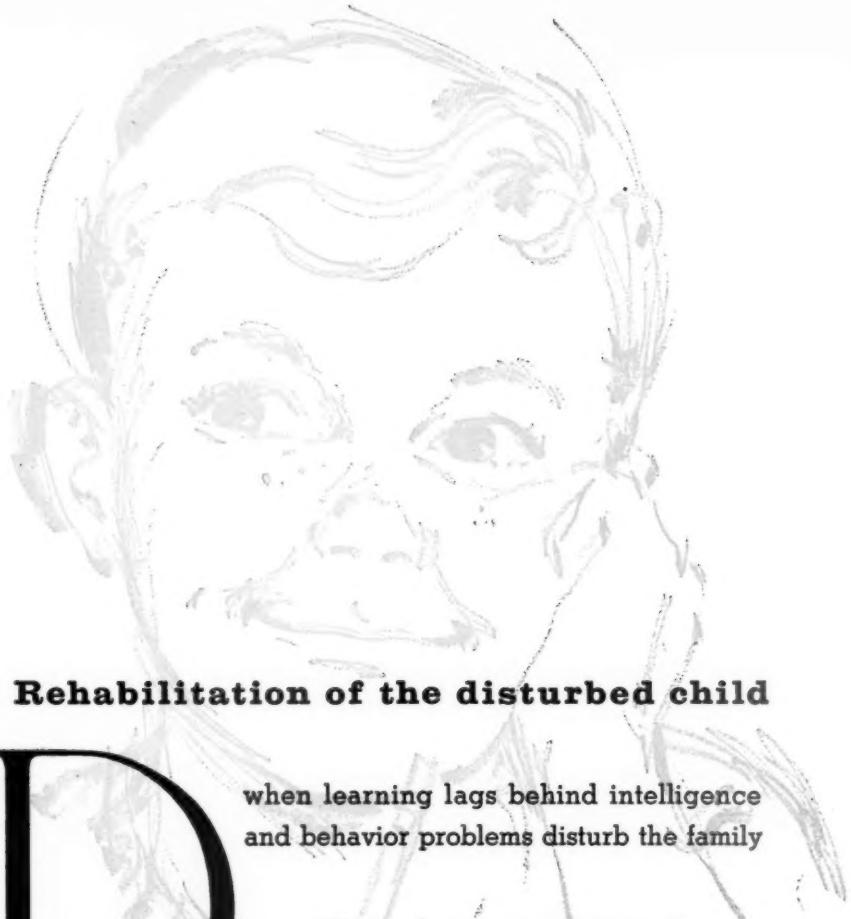

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1. Goldwasser, E.; Jacobson, L. O.; Fried, W., and Pizak, L. F.: Blood *13*:55 (Jan.) 1958. 2. Murdock, H. R. Jr.: Am. Pharm. Assoc. (Sci. Ed.) *48*:140, 1959. 3. Goldwasser, E.; Jacobson, L. O.; Fried, W., and Pizak, L.: Science *125*:1085 (May 31) 1957. 4. Center, W. M.: Clin. Med. *7*:713 (April) 1960. 5. Holly, R. G.: Obst. & Gynec. *9*:299 (Mar.) 1957. 6. Ausman, D. C.: Journal-Lancet *76*:290 (Oct.) 1956. 7. Flynn, R. T.: Therapy with Cobalt and Iron for Correction of Anemia in Pregnancy, Presented at Michigan and Wayne Co. Acad. GP, Postgrad. Clinic, Detroit, Mich., Nov. 11-12, 1959. 8. Tevetoglu, F., and Ozkaragoz, K.: M. Times *86*:81 (Jan.) 1958. 9. Craig, P. E.: Clin. Med. *6*:597 (April) 1959. 10. Hill, J. M.; LaJous, J., and Sebastian, F. J.: Cobalt Therapy in Anemia, Texas J. Med. *51*:686 (Oct.) 1955. 11. Tevetoglu, F.: J. Pediat. *49*:46 (July) 1956.

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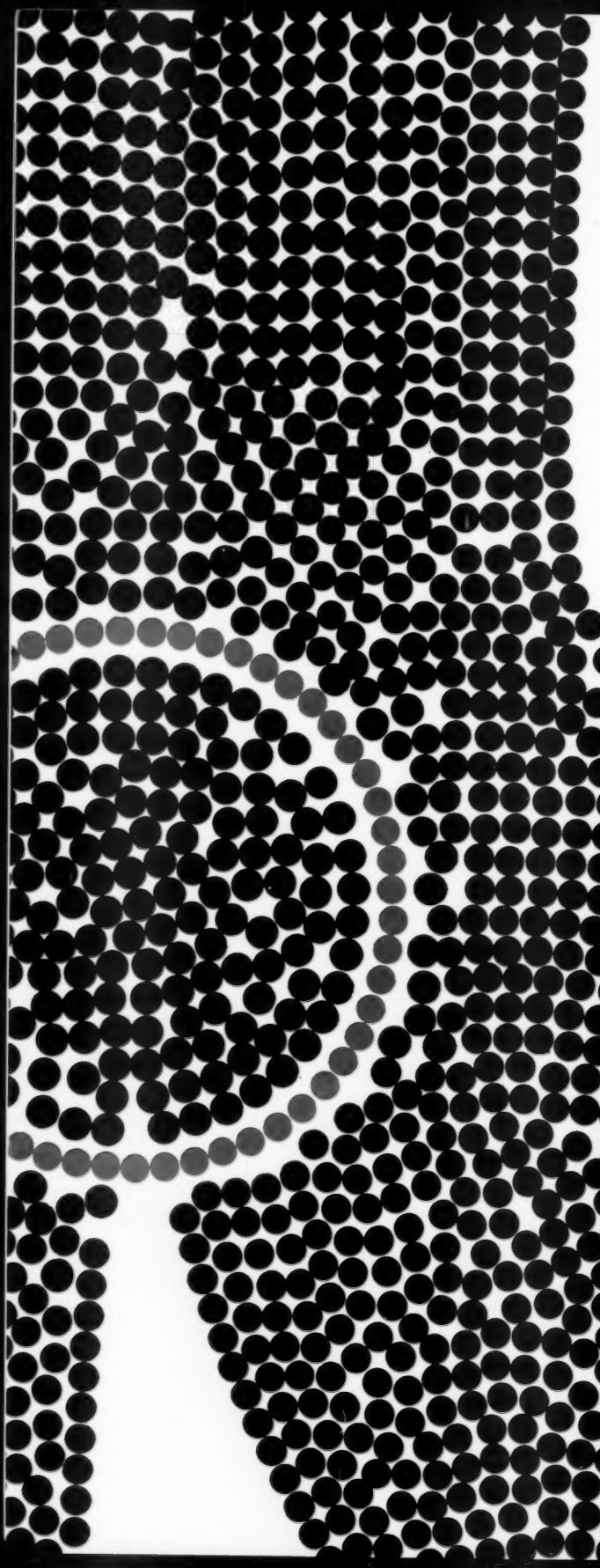

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3. R. C. V. ROBINSON AND L. E. HARMON, ANTIBIOTICS ANNUAL 1958-1959, NEW YORK, MEDICAL ENCYCLOPEDIA, INC., 1959, P. 113.

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JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION is published monthly by the American Medical Women's Association, Inc., at 136 Fourth Ave. North, Nashville 3, Tenn. Entered as second class matter at the post office at Nashville, under the Act of Aug. 24, 1912. Acceptance for mailing at special rates of postage provided for in Section 1102, Act of Oct. 8, 1917, and authorized July 15, 1918. Copyright, 1960, by the American Medical Women's Association, Inc.

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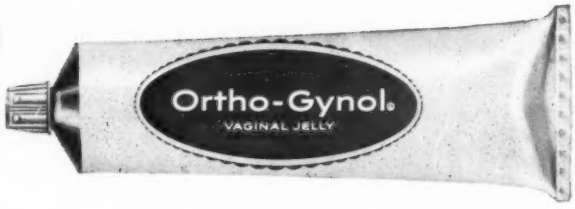

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2. Kistner, R. W.: Endometriosis and Infertility, Clin. Obst. & Gynec. 2:877 (Sept.) 1959.

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3. A. M. A. Committee on Toxicology: Accidental Iron Poisoning in Children J. A. M. A. 170:676, 1959

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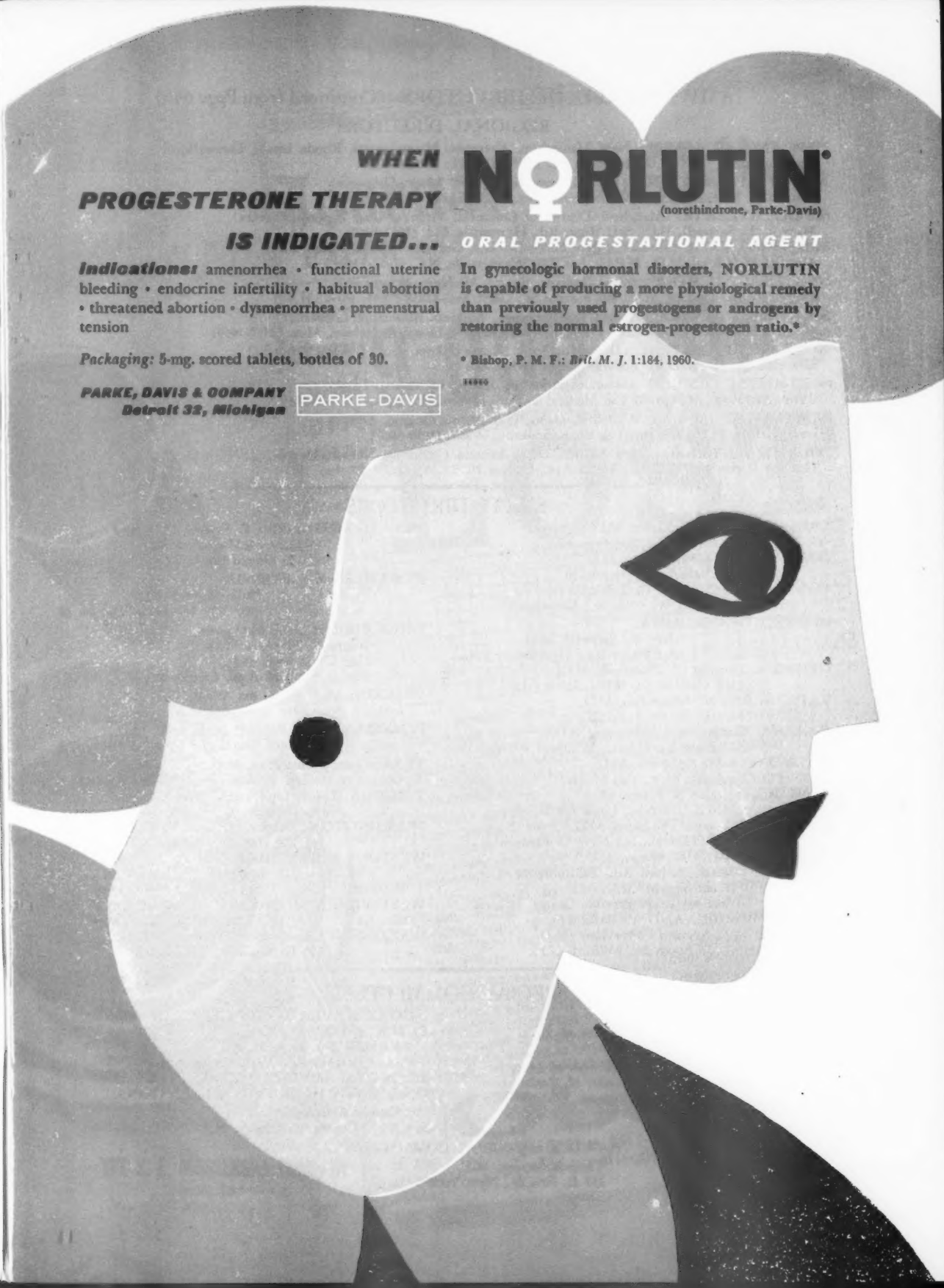

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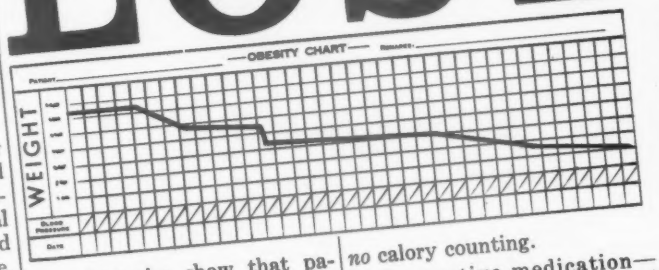

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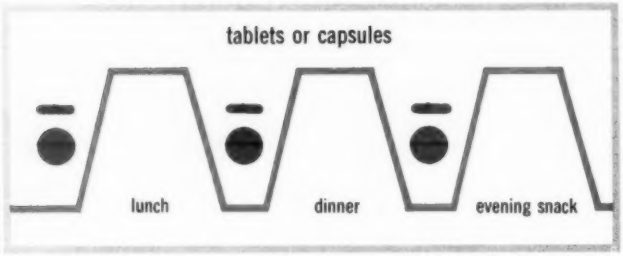

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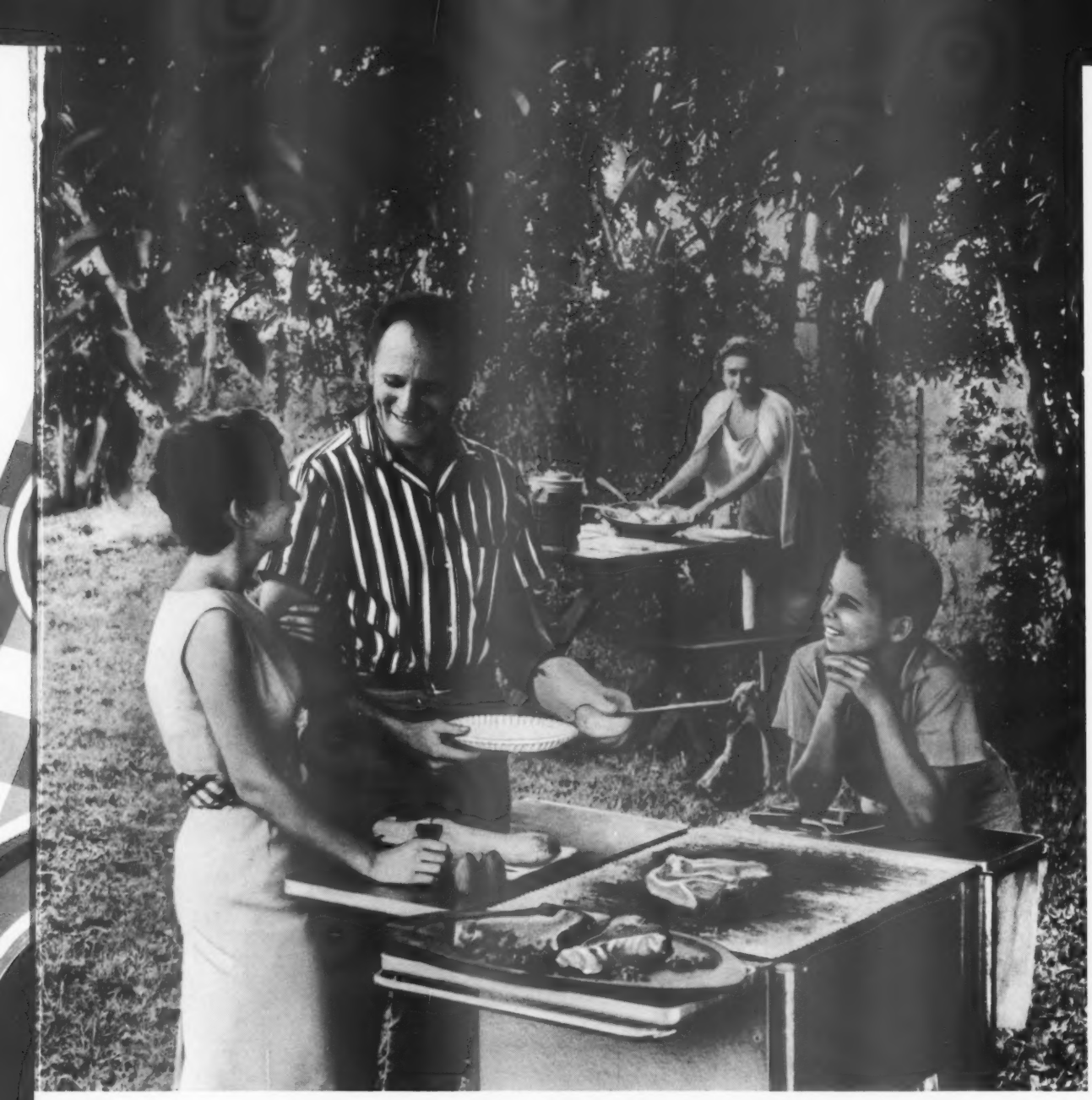

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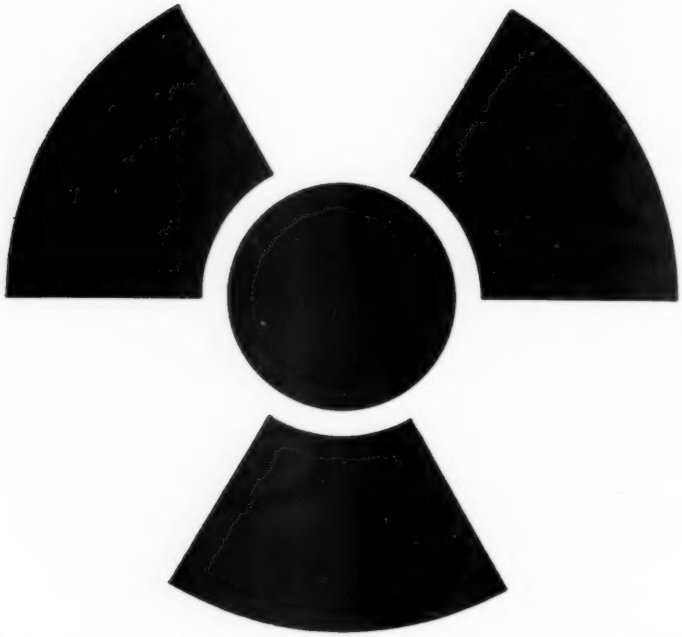

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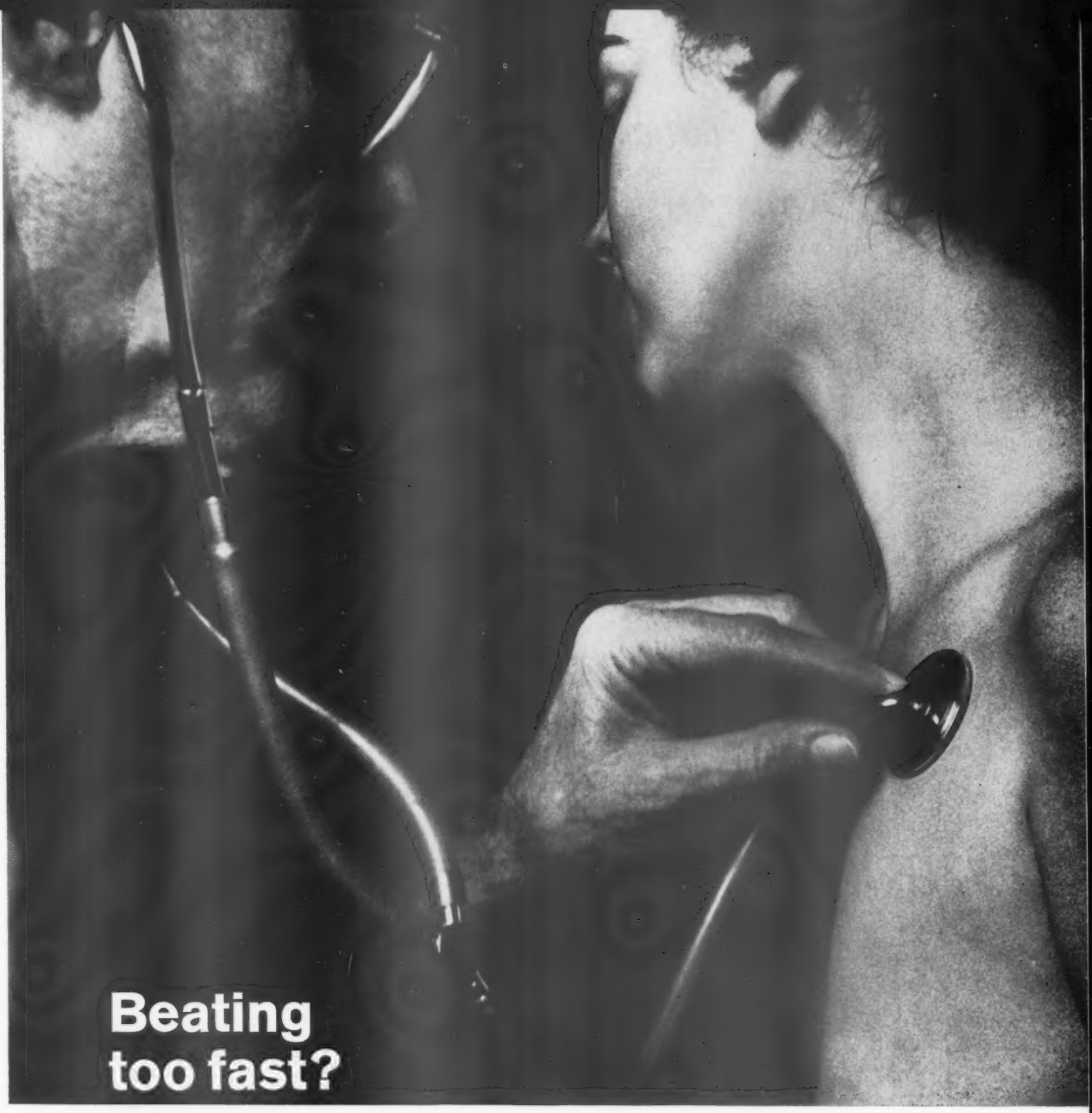

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Volume 15 July, 1960 Number 7

The Urologist's Approach to Adrenocortical Hyperfunction*

Frank Hinman, Jr., M.D.

SURGICAL PROCEDURES for endocrine disorders of the adrenal glands are resorted to after differentiation of primarily androgenic lesions, producing virilization, and primarily metabolic disorders, resulting in Cushing's syndrome. Mixtures of the two groups are common.

ENDOCRINOLOGICAL DIFFERENTIATION

Virilization resulting from excessive excretion of 17-ketosteroids may be caused by ovarian or adrenal overactivity. If the adrenal gland is responsible, the schema in table I will allow one to make the distinction, so important in rational surgical intervention, between hyperplasia, adenoma, and carcinoma. If the virilization is congenital and has resulted in partial masculinization of the external genitalia and rapid growth, cortisone suppression will establish the diagnosis and further diagnostic steps are unnecessary. If the virilization is acquired, it may be due to either a benign adenoma or carcinoma. Cortisone will partially suppress the secretion from an adenoma but not from the carcinoma since its cells are autonomous. Presacral gas insufflation will demonstrate a suprarenal mass on one side and permit operation by an incision best designed for removal of the localized mass.

Cushing's Syndrome presents a more complex problem in differentiation (table II).

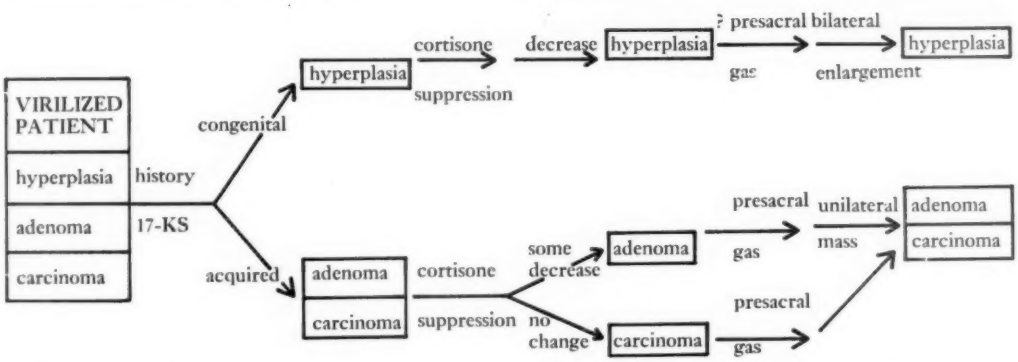
Measurement of the basal excretion of 17-hydroxycorticoids helps in differentiating hyperplasia and adenoma from carcinoma, since extremely high levels are rarely found without carcinoma. However, the mean levels resulting from bilateral hyperplasia (23 mg. 17-hydroxycorticoids per 24 hours), while dou-

* Read before the 11th Postgraduate Assembly of the Endocrine Society, Nov. 11, 1959, in San Francisco.

Dr. Hinman is Associate Clinical Professor of Urology, University of California School of Medicine, San Francisco.

TABLE I

Differentiation Between Hyperplasia, Adenoma, and Carcinoma in Adrenal Virilization



ble those of the highest normal value, are not appreciably different from those resulting from an adenoma (18 mg. 17-hydroxycorticoids per 24 hours). Caution in interpretation is needed because hydroxycorticoid levels rise with body size.

The eight hour ACTH stimulation test helps differentiate benign from malignant lesions, since a threefold to fivefold increase is found with hyperplasia and adenoma but no significant increase is seen in (autonomous) carcinoma (table III).

The cortisone suppression test is of much less value in Cushing's syndrome than it is in virilizing disorders. However, greater suppression is found in benign lesions than in those that prove malignant.

RADIOGRAPHIC DIFFERENTIATION

We have not found plain roentgenograms, plain tomograms, and intravenous urograms adequate for visualization of small tumors. Presacral pneumograms (with simultaneous tomography) show the hyperplastic glands as large, fatty, reticulated bodies, quite unlike the compact appearance of normal glands. We have shown, however, that the size of the gland is not necessarily proportional to the severity of the symptoms or hormonal

TABLE II

Differentiation Between Hyperplasia, Adenoma, and Carcinoma in Cushing's Syndrome

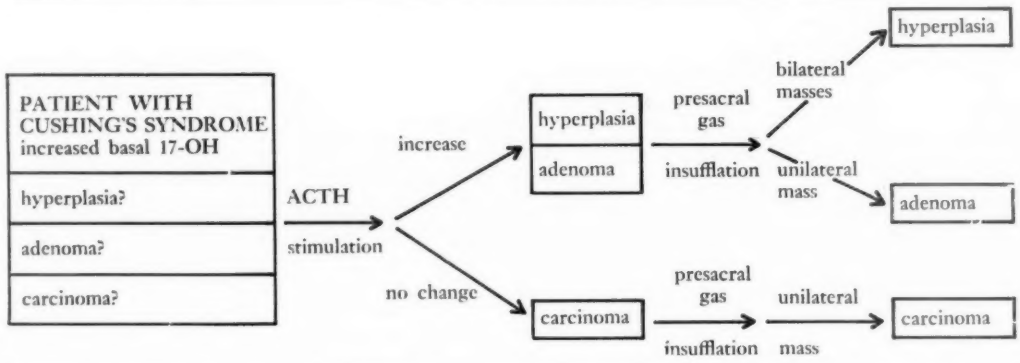


TABLE III

Reliability of ACTH Stimulation Test in Twenty Cases of Cushing's Syndrome Surgically Verified

	Total Cases	Correctly Diagnosed	Equivocal	Error
Hyperplasia or adenoma	18	17	1	0
Carcinoma	2	2	0	0

changes, so that the films will rule out tumor rather than prove adrenal hyperplasia. Adrenal overactivity from hyperplasia must be proved endocrinologically.

The growing adenoma first rounds off the contour of the angular gland and gradually assumes a spherical shape. Of considerable diagnostic importance is the observation of atrophy of the contralateral adrenal gland, an atrophy brought about by the excessive corticoid production of the tumor (Fig. 1). Carcinoma and adenoma will appear the same unless extracapsular spread has begun; this may block the distribution of gas about the mass. The usefulness of gas insufflation is shown in 18 of 20 cases of proved Cushing's syndrome (table IV).

AIM OF OPERATION

Once the type of lesion and its site have been determined by roentgenography (bilateral hyperplasia or adenoma-carcinoma), appropriate medical or surgical treatment can be applied as follows:

Androgenic (Virilizing) Adrenal Disease
- Hyperplasia—cortisone suppression
- Adenoma or carcinoma—excision (no contralateral atrophy)

Metabolic Adrenal Disorder (Cushing's Syndrome)
- Hyperplasia—total bilateral excision
  —subtotal excision
  —pituitary radiation
- Adenoma or carcinoma—excision (expect contralateral failure)

The treatment of the virilizing lesions is straightforward. Congenital lesions (bilateral hyperplasia) require only continued suppression with cortisone. The tumors, almost always suprarenal in position, must be cleanly excised. Since they produce no excess of metabolic steroids, pituitary inhibition with resultant contralateral adrenal atrophy is not found and added support with cortisone is not needed.

Fig. 1. Adrenocortical adenoma with consequent contralateral adrenal atrophy. *(Left)* Presacral pneumogram showing adenoma of left gland with atrophy of right adrenal. *(Right)* Presacral pneumogram with tomography showing right adenoma of right gland and atrophy of left adrenal.

TABLE IV

Reliability of Roentgenographic Studies

	Total Cases	Plain Films			Presacral Pneumograms		
		Diagnostic	No Value	Error	Diagnostic	No Value	Error
Normal size and hyperplasia	14	0	14	0	13	0	1
Adenoma	4	0	3*	1	4	0	0
Carcinoma	2	0	2	0	1	0	1

* Includes 1 case in which low left kidney suggested tumor and proved correct.

Treatment of lesions producing metabolic disorders is more complex. In mild cases, x-radiation to the pituitary may give an adequate remission. For the more severe disturbances, it is necessary to remove surgically the hyperfunctioning tissue. If one gland is first removed and the postoperative level of 17-hydroxycorticoid excretion after ACTH stimulation remains half the preoperative level, subtotal removal of four fifths of the remaining gland may be adequate. If, however, the remaining gland hypertrophies after operation to such an extent that it produces twice its preoperative amount of hydroxycorticoids upon stimulation by ACTH, total removal is required. If a two-stage procedure is not desired, bilateral total adrenalectomy gives better long-term results since (1) the amount of viable adrenal that must be preserved at operation is hard to judge; (2) the remaining portion may hypertrophy, causing recrudescence of the disorder; and (3) the patient is more easily regulated if totally adrenalectomized than if possessing a less than adequate segment of adrenal.

TECHNIQUE OF OPERATION

Four approaches to the adrenal areas are in common use.

The lateral approach is best for tumors that have been localized preoperatively. Excision of the eleventh rib extrapleurally gives excellent exposure of the adrenal gland and is preferable to removing merely the twelfth rib. An alternative is resection of the entire twelfth rib plus a segment of the eleventh rib at the angle. To some this may be easier to perform than the higher incision.

The transthoracic (ninth interspace) approach need be used only for the largest adrenocortical tumors but may be the best one for pheochromocytoma, since it affords wider exposure before the tumor need be touched.

The transperitoneal operation, in which either a mid-line or an upper transverse incision is made, affords an opportunity for bilateral visualization of the adrenals, if preoperative localization has not been done, and for inspection of the ovaries as well. However, it provides less direct access to the suprarenal areas (which are really inside the chest cage). This explains the need for radiographic localization, which then permits the safest and most direct surgical approach.

A bilateral dorsal incision, advocated by Hugh Young, has the same advantage as the anterior approach in that it allows exposure of both glands simultaneously; however, exposure of the adrenal glands by this method is usually less satisfactory than by the high lateral approach. It is unsuitable for pheochromocytoma.

PREOPERATIVE AND POSTOPERATIVE TREATMENT

In patients with virilizing tumors, because the contralateral adrenal gland can be assumed normal, no specific preparation or aftercare is required. For the patient with Cushing's syndrome, whether resulting from hyperplasia or tumor, an effective dosage regimen of cortisone acetate is as follows: 50 mg. intramuscularly one day preoperatively, 50 mg. preoperatively and every four hours on the day of operation, 200 mg. in divided doses one day after operation, 150 mg. in divided doses two days after operation, 100 mg. in divided

TABLE V

Differentiation Between Metabolic and Androgenic Adrenal Hyperfunction

	Basal 17 Hydroxy-corticoids	Basal 17-Ketosteroids	ACTH Stimulation	Cortisone Suppression	Gas Insufflation	Treatment
Cushing's syndrome						
Hyperplasia	↑	slight ↑	>5x ↑	↓	bilateral ↑	partial or total adrenalectomy
Adenoma	↑	slight ↑	>5x ↑	↓	unilateral ↑ with contralateral ↓	excision
Carcinoma	↑	slight ↑	no change	no change	unilateral with contralateral	excision
Virilization						
Hyperplasia	N or ↓	↑	↑	↓	bilateral ↑	cortisone suppression therapy
Adenoma	N or ↓	↑	↑	↓	unilateral ↑ with contralateral ↓	excision
Carcinoma	N or ↓	↑	no change	no change	unilateral with contralateral ↓	excision

doses three to four days after operation, and 50 mg. in divided doses as a maintenance dose. In addition, 40 to 80 mEq. of potassium is needed every 24 hours, given as 3 to 6 Gm. potassium citrate orally.

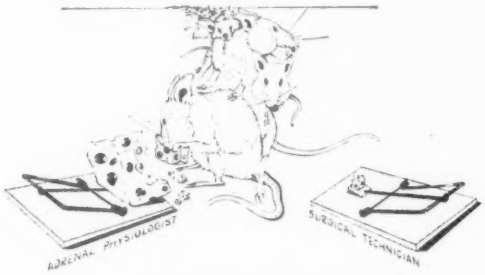
SUMMARY AND CONCLUSIONS (TABLE V)

Endocrinological tests (steroid determinations made under basal conditions and after ACTH stimulation or cortisone suppression) establish the cause of adrenocortical hyperfunction, separating virilizing from metabolic disorders and often benign from malignant lesions.

Radiographic procedures, of which presacral gas insufflation with tomography is the most reliable, differentiate hyperplasia from tumor and localize the lesion, permitting an operative approach that provides the greatest exposure.

Surgical technique is the least important consideration after the diagnostic steps have been completed. An incision can be chosen that leads directly down on an already localized tumor, by the way of the bed of the eleventh rib, to provide optimal exposure. Preoperative and postoperative substitution therapy is now relatively simple since cortisone has become available.

In conclusion, the interested urologic surgeon follows the diagnostic differentiations as closely as he studies the line of his incision. These often difficult patients may be best operated upon by the surgeon with an interest in adrenal physiology (Fig. 2), who provides the better mousetrap.



ACKNOWLEDGEMENT

The author acknowledges the major collaborative efforts of Peter H. Forsham, M.A., M.D., Department of Medicine and the Metabolic Unit, and Howard L. Steinbach, Department of Radiology, University of California School of Medicine.

Practical Management of Atopic (Allergic) Illnesses

Eloise Whittlesey Kailin, M.D.

ATOPIC SENSITIVITIES appear as bronchial asthma, hay fever, vasomotor rhinitis, vernal catarrh, urticaria, angioneurotic edema, purpura, shock, atopic (usually flexural) eczema or neurodermatitis, and sometimes as Menière's syndrome, vomiting, diarrhea, and other gastrointestinal complaints. There is a familial predisposition to allergy, and more than one of the afore-mentioned symptom complexes often appear in the same individual. The mechanism is one of cellular poisoning, occurring when an antigen such as pollen, dust, food protein, or drug meets its specifically altered protein antibody counterpart, which is fixed in the reactive tissue. Whether the primary injury in the atopic state occurs in vascular endothelium, epithelial cells, or other elements of tissue is not yet known. However, after the meeting of antigen with antibody, cellular damage results and histamine is released. There is good reason to believe that other toxic substances are also liberated by the injured cells. Vasodilatation results, followed by release of fluid and occasionally even of red blood cells into the surrounding tissue. The allergic reaction may be sharply localized within a tissue as in urticaria; it may involve an entire organ such as the lungs in asthma; or it may extend to generalized vascular fluid loss as seen in allergic shock reactions. Characteristically, eosinophils migrate to the reacting area. The accumulation of edematous fluid in the tissues and the reflex responses to tissue distention in a given site determine the clinical manifestations observed. In hay fever edema of the nasal mucosa and/or the conjunctiva produces the typical pattern of nasal blockage, rhinorrhea, tearing, sneezing, and itching. In bronchial asthma the edema of the bronchial mucosa impedes the airway—an effect greater on expiration than on inspiration because of the physiological contraction of bronchioles in the expiratory phase of respiration. Bronchoconstriction may also occur as a secondary reflex reaction to the edema, and the result is the dyspneic patient with wheezing and air trapped in his lungs. In urticaria edematous fluid seeps from small cutaneous capillaries, with certain localized areas being more prone to allergic injury than others. In angioedema larger and deeper blood vessels are the site of significant injury and an entire hand or lip may double in volume. Similarly, in gastrointestinal reactions edema of a localized area of the food canal results sometimes in intestinal obstruction but more usually in reflex responses such as vomiting, cramping pain, diarrhea, or constipation.

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WHY BOTHER TO FIND CAUSES?

With the severly ill allergic patient the answer to the question of "Why seek the cause?" becomes all too obvious. It is true that antihistaminic drugs and steroids have brought comfort to many. But it is also true that death rates from bronchial asthma have been increasing since the advent of the steroids and that chronic treatment with steroids imposes appreciable hazards, such as peptic ulcers, widespread infection, pathological frac-

tures, thromboembolic phenomena, and failure of children to grow. Recently, I have seen all these hazards occur. There are also hidden costs in the therapeutic course limited to suppressive medicaments. Most important is the finding that the degree and extent of allergic involvement tend to increase, regardless of symptom suppression. Additional tissues become clinically reactive and we see bronchial asthma develop in hay fever victims or eczematous children go on to asthma and/or hay fever. The number of allergens to which a person is reactive also increases, even when masked allergic reactions are taking place. We thereby observe the ragweed hay fever or asthma reactor first having symptoms for weeks after his usual season and then having them all year round.

Less measurable, but nonetheless valid, are the psychological costs of unknowingness. One of these costs concerns the dependence of the individual on the physician and on medicaments, fostering the feeling of physical incompetency or inborn weakness. The other cost, because suppression usually is incomplete or variable, is that of never knowing when discomfort, disablement, or, in some cases, near-disaster will strike. The patient's well-being is dictated by the capricious winds of chance. In time, with repetition of abrupt illnesses, the individual is likely to discover that his illness can be used to gain some desirable ends. It may serve as a handy excuse for avoidance of unpleasant tasks or may be used as a weapon or attention-demanding device. In everyday practice I find the recently afflicted patients most co-operative and easy to handle, whereas those who have been struggling for 10 or more years, even those severely ill, protest bitterly every step of the way toward health. The moral of this story is: catch an allergy young, diagnose it fast, find the allergens, and teach the patient to avoid them. Even pollen and dust offenders can be avoided to a significant extent if you know how.

HOW TO FIND AN ALLERGEN

Sometimes a patient can tell you from his own observation of cause and effect what is bothering him. Sometimes he can tell you the circumstances as to season or time and place which are related to his trouble and you may then deduce the causative agent. And sometimes the physician must devise situational traps to capture an elusive allergen. In the first instance all that is required of the physician is an open mind and a willingness to entertain the patient's suspicion as valid, even if it is a weird one, until it can be proved or disproved. The patient is much more apt to be right than wrong. Recently I received a letter from a soft drink manufacturer confirming the presence of oil of wintergreen (methyl salicylate) in his dietetic root beer. The patient, sensitive to the salicylate fraction of aspirin, had reported an aspirin reaction after drinking this product.

In the second instance the clues given by the patient must be developed. These clues may point to allergies encountered by inhalation or by ingestion.

Seasonal complaints often match the seasonal succession of pollen seasons characterized by trees in early spring, grass pollination in early summer, and ragweed in August and September. Fungous spores also show seasonal variations, certain types of fungi being prevalent in June, reaching a peak in July, and reaching another peak in September or October. Other fungi occur year round in stuffed material of all types and in dust, especially basement dust. There is often a "timing history" for house dust sensitivity, with a peak incidence of trouble when the heat is turned on and relative relief when windows are thrown open in the spring. House dust is a very complex mixture of individual kinds of dust, such as fungi, animal hairs, tobacco, glue, and insecticides, but an early identification of "dust-sensitive" or "not-dust-sensitive" factors can speed final diagnosis and treatment considerably.

Leads for pollens, molds, and house dust, encountered by inhalation and therefore called inhalants, are readily checked by skin testing, which is quite safe when done by the scratch technique, provided positive reactors are wiped off the skin when they become obvious. If the scratch test for these inhalants is negative, sometimes the history can be confirmed by testing intracutaneously with graded concentrations of extract. This is particularly useful when house dust sensitivity must be considered, as it must in all cases of allergic rhinitis and bronchial asthma, even summer seasonal cases. Pollen tests need be done only if the history suggests them as possible troublemakers. Only rarely will the results of an intracutaneous test be negative for pollen or dust in full testing concentrations when actual clinical sensitivity exists. More frequently, a positive reaction is elicited in the absence

of clinical symptoms, as an antibody may appear years prior to clinical sensitivity or be detected for several years after clinical remission. Positive reactions on skin tests therefore do not serve alone as indicators of the need for treatment although they may serve to confirm (or cast serious doubt on) a history of clinical sensitivity to inhalants.

Food and drug allergens, causing asthma and allergic rhinitis, are more difficult to pin down but by no means impossible. The telltale lead in the history is likely to be a story of trouble that occurs any time of the year rather than seasonally. There may be recurrences at fairly regular intervals (such as migraine headaches occurring two to three times a week or with intervals as long as six to eight weeks). These regular interval patterns suggest a cyclic reaction to foods or drugs taken daily or almost daily. Highly irregular patterns with intervals of days, weeks, and sometimes months, irrespective of season, suggest food or drug sensitivity to substances encountered only irregularly. Seasonal histories of food sensitivity may be found, of course, for foods usually eaten at a particular time of year or in unusual quantity at a particular time of year. In summer milk intake often increases significantly in active children. Other "summer" foods include berries, fresh corn, melons, plums, peaches, and lemons. Traditional foods and drinks of Thanksgiving and Christmas meals provide other examples. Unfortunately, results on skin tests with foods are extremely unreliable and, with few exceptions, are not obtained at all with drugs, even in the presence of violent clinical sensitivity (penicillin is one of the exceptions). The diagnosis must be reached by one form or another of clinical trial.

If the troublesome allergen is encountered only very occasionally—an irregular and infrequent incidence of symptoms would suggest this—a good technique is to ask the patient for as complete a record as possible of all oral intake and surface applications for 72 hours prior to the onset of allergic symptoms. This should include all food ingredients, drinks, medicaments, tonics, candy, chewing gum, mouthwashes, dentifrices, nose, eye, or ear drops, soaps, bathing and washing preparations, colognes, cosmetics, hair dressing, deodorants, contraceptives, douches, skin medication, and, if applicable, use of shoe polish, household cleansers, and materials handled at work. The list should be extremely detailed. It will be found that most of the items on the list are encountered to the same extent at frequent intervals and these may be eliminated from consideration. Deliberate trial with each of the remaining "unusual" contacts may be carried out singly at intervals of at least five days.

Alternatively, one may compare such lists compiled at the times of repeated natural occurrences of the allergic reactions to ascertain the likely suspect. It must be remembered that intake of alcoholic beverages or ingestion of food after a long period of fasting or in unusual quantity may result in an allergic reaction on one occasion whereas a reaction does not occur on another exposure without these factors.

When there are no really good leads there are two clinical approaches to establish the presence or absence of food, food-additive, or drug sensitivity. In either case it is wise to have the patient keep not only a detailed record of all substances ingested but a daily running commentary on symptoms. With one approach important dietary segments are eliminated and then added in unusual amounts to attempt to cause a heightened reaction. One such pattern provides for the avoidance of all milk, cheese, and ice cream * for a week (use of butter, not oleomargarine, is allowed) followed by the ingestion of a quart of milk daily for a week. Should an allergic reaction occur or be aggravated during this period, milk is eliminated at once and after a second week of elimination the trial is repeated; if there is a recurrence of symptoms again, a third trial should be done. Three such reactions, with relative freedom from symptoms while avoiding milk, would establish a diagnosis of intolerance to milk or to something in the milk as tested, such as penicillin or other contaminants.

If the first readdition of milk does not produce an allergic reaction, milk may then be used ad libitum and one may proceed to a study of egg and fowl.† The latter is done along with egg because fowl as bought in the market may contain egg protein. After the one week of total avoidance there is ingestion of two eggs daily and fowl once daily for one week, stopping at once if symptoms recur; one then rechecks thoroughly should a positive reaction be obtained.

* See appendix on Milk Avoidance.

† See appendix on Egg and Fowl Avoidance.

The third food group to be studied are the cereal grains: wheat, rice, rye, corn, oats, and barley.* Often allergy exists to several of these, and occasionally to all members of this group, so that it is imperative that ingestion of all grains be simultaneously stopped. Potatoes, bananas, Lima beans, and tapioca are substituted liberally. The elimination period must be at least two weeks; three weeks gives an even clearer test. Readdition is done with wheat only. A reaction is often delayed to between the fourth and seventh day after reintroduction of this grain. Test feeding is done with Cream of Wheat, Wheatena, homemade pie crust, and flour, which is used in cooking such items as gravy or biscuits. Any one specified brand of whole wheat bread may be used on the initial test, but if rechecking is necessary bread should not be used because it is a complex including many nongrain allergens. The less refined and less well-cooked forms of wheat are better test substances than such processed foods as dry cereals. If wheat appears to cause symptoms it is carefully rechecked, using only plain flour for homemade wheat products as the test agent. When wheat is a troublemaker the other grains are added one at a time at intervals of a week. Usually, if wheat is not an offender the other grains do not cause trouble, and we sometimes add all the grains at the same time if wheat was checked as clinically negative.

The fourth step, if none of the three major groups has caused difficulty, would be to limit the diet to milk, cottage cheese, eggs, and fowl, and such grains as have been tested, for a period of one week.† This double-checks the "big three," for if the patient was sensitive to two of these staples he might have balanced one troublemaker against the other in his elimination-addition process; thus the error will be revealed and he will become sicker on the wheat-egg-milk diet. On the other hand, if he is allergic to another part of his diet, as yet unstudied, he will probably improve on this diet. Then one can add to this base diet one food at a time, about every five or six days, until the troublemaker is located.

Another technique is that proposed by Dr. Albert Rowe in "The Elimination Diet." I am increasingly using my own variations of this tool. The patient is put on a diet limited to certain specific foods that, in the physician's judgment, are least likely to cause his allergic symptoms.* Advantages are that it is easier for the patient to be told exactly what he may eat, with menus, and it is easier for him to be constantly adding to this diet without further subtractions. Again, one adds a new food every five or six days as a rule (except grains, to which the patient is apt to react more slowly). Sometimes foods are added in related groups, such as citrus fruits, or cabbage, broccoli, Brussels sprouts, and kale, to speed return to a full diet. In adding to the elimination diet, any suspected food or group is immediately dropped and is not readded for further checking until the diet base is quite broad.

It should be observed that the afore-mentioned techniques do not prove the existence of allergy per se but serve to indicate a specific intolerance. Intolerance for a food may rest on other than an allergen-antibody mechanism; for instance, the ingestion of tiny amounts of milk may cause diarrhea due to a galactose intolerance. Therefore, the physician's imagination must be kept active and alert to possibilities other than allergy to explain specific intolerances.

MANAGEMENT WHEN THE OFFENDER IS LOCATED

Food Allergy. When food offenders are located, one must compensate for their nutriments and learn to substitute for the sake of ease in preparing meals and for pleasure in eating. For instance, if milk must be avoided, calcium tablets should be prescribed as well as extra protein and supplementary vitamins. Wesson oil and water with a little extra egg, for example, can substitute for milk in baking recipes. The patient may be referred to Marion Conrad's "Allergy Cooking" (Thomas Y. Crowell Company, New York, 1955) for further assistance.

The outlook in food allergy varies with the age of the patient and the duration of his illness. Periods of rapid growth such as early childhood and puberty, and periods of endocrine changes such as puberty and menopause, are likely to be turning points toward recovery from allergic symptoms. Total avoidance of food offenders leads to a quicker outgrowth of sensitivity, which may vary from several months for the infant to sev-

* See appendix on Cereal Avoidance.

† See appendix on Wheat-Egg-Fowl-Milk Diet.

* See appendix on Basic Elimination Diet.

eral years for the adult. Partial abstinence is often more convenient if one holds the quantity ingested below the point of causing overt symptoms, but this may delay eventual recovery. For the small child, I believe that total abstinence is warranted. The older child and adult should be allowed to help decide which course should be followed. "Older adults" have less future to gamble and usually choose "intake just below reaction point."

Dust Allergy. House dust allergy should be approached with an eye to teaching the patient to lower his own daily allergen load by a few well-placed engineering tricks, principally concentrating on the bedroom as an easy-to-handle source of highly allergenic materials. It is surprising how often this approach completely solves the patient's problem. The expenditure is usually under $20 for materials and the initial cleanup takes only 8 to 10 hours. Upkeep takes less time and effort than before "dustproofing" and major cleanups are usually needed only once or twice a year. Less than half of my dust-sensitive patients so managed needed immunization, thus saving time, money, and dependence on the physician. Of those who do need supplementary immunization, most who previously have had "shots for dust" notice that they are getting superior results, which of course makes sense, because there is less allergen to counteract. It is indispensable to use airtight casings for mattress and box springs, sealed along the zipper with adhesive tape. Long-term economy dictates custom-made synthetic-rubber-backed percale casings.* Clear plastic casings obtained in department stores serve equally well, but they tear easily. I usually recommend pillows of new rubber or dacron. The bedroom door should be kept closed except when used as a passage; an extra filter at the bedroom openings of the central heating system should be added; and pets and all stuffed objects should be removed from the room. The room should be cleaned with a dampened or "treated" cloth only and no vacuum cleaner should ever be brought into the bedroom.†

Pollen Allergy. The geographic distribution of pollen varies as does pollination time in different areas. For those allergic to tree pollens, a trip for the relatively short season can be used to excellent advantage. A move either south or north of 200 miles or so for three or four weeks can work wonders. Grass pollen is hard to avoid geographically. Ragweed-pollen-free areas are well known and a listing can be obtained for 25¢ from Allergy Foundation of America, 108 Second Ave., New York City 17. If vacations are impracticable a great deal can still be accomplished. Most of the pollen is outdoors and concentrations are particularly heavy in fields. Garden flowers are sufficiently like ragweed to produce hay fever symptoms and should also be avoided. The patient should stay indoors with windows closed, using filters and fans behind filters for ventilation. An ordinary hospital gauze mask can be used to excellent advantage and other face masks are also available and useful.* In addition, hyposensitization should be considered a "must" if any suggestion of asthma complicates the hay fever; this treatment is excellent insurance in any case. On the Atlantic Seaboard about 1 person of 3 unimmunized ones with ragweed hay fever develops asthma, and in the Midwest about 2 of 3 develop this complication. Hyposensitization for hay fever cuts this unpleasant sequela down to about 2 per 100. Of course the lucky individual who can totally avoid this pollen during its entire season—six weeks for a large part of the country and longer in the South—will have no such difficulty. We wish him bon voyage and a pleasant stay—but tell him not to return for Labor Day.

SUMMARY

The symptoms of atopic illness are caused by edematous tissue and the physiological consequences of localized tissue distention. Causes may be broken down by history and skin testing into those due to air-borne particles (dusts, pollens, or molds) and those ingested or absorbed through local applications (food or drugs). Skin tests rarely help discover the latter troublemakers. The author describes two basic techniques for dietary manipulation, which allows one to discover food and drug allergens, and gives basic instructions for avoidance of house dust and pollens.

* Obtainable from Allergy-Free Products for the Home, Mr. and Mrs. M. G. Gray, 1162 W. Lynn St., Springfield 1, Mo., and Allergen-Proof Encasings, Inc., 4046 Superior Ave., Cleveland 3.

† See appendix on Prescription for Avoiding House Dust for instructions given patient.

* See appendix on Pollen Avoidance for detailed instructions to patient.

APPENDIXES

MILK AVOIDANCE

Do not drink milk or eat foods that are made from milk. This will include: milk, chocolate milk, ordinary cream, custards, cornstarch puddings, mashed potatoes or scrambled eggs if made with milk, ice cream, cheese, milk in soups or cream sauces, buttermilk, condensed milks, malted milk, and powdered milk.

Unless you are extremely sensitive, you may eat bread, cakes, candy, cookies, whipping cream in small amounts as in coffee, and oleomargarine. Butter is almost always well tolerated, so you may use it freely.

Follow this avoidance program for —— days. On readding milk, take extra large amounts (double usual intake if possible) but stop using milk at once should any discomfort result. If there is no change in symptoms after seven days milk is probably not an offender.

EGG AND FOWL AVOIDANCE

Do not eat egg, chicken, turkey, duck, squab, or any foods containing them. Remember that egg is found in mayonnaise, meringues, whips, certain pies or breads (which may contain egg or be glazed on top with egg white), cookies, cakes, muffins, doughnuts, pancakes, waffles, egg noodles, batters such as fried foods are dipped in, breading mixtures, eggnog, custards, candy (as Divinity), Bavarian creams, fritters, custard pie fillings, sausage, meat loaves, croquettes, french toast, consommé, boullions (cleared with egg), some baking powders, and root beer. Candies may be brushed with egg for a lustrous surface.

Read labels on prepared foods.

Follow this avoidance program for —— days. On readding, take two eggs daily and fowl every day for seven days. Stop using eggs and fowl at once should any discomfort or signs of any illness occur in the test period, which is one week of "force feeding."

CEREAL AVOIDANCE

Do not eat corn, rice, rye, wheat, oats, or barley, or foods made with these substances. This includes pastry made from rice flour, popcorn, corn muffins or bread, corn chips, rye bread, Postum, cooked cereals, bread, pastry, any part of pies, cookies, crackers, pretzels, doughnuts, muffins, rolls, pancakes, dumplings, ice cream cones, waffles, foods dipped in flour or fried in batter (Swiss steak, fried chicken, and fish), gravies, thickened soups and sauces, macaroni, noodles, spaghetti, malted drinks, certain vitamin preparations, frankfurters, and sausages. "Potato bread" and graham flour are made with wheat.

Exception. You are allowed to eat one helping of any dry cereal (including shredded wheat and corn flakes) daily if you feel emotionally upset by eliminating the grain family. We will get a clearer and better test if you are able to avoid all forms of grains.

Substitutions. Unless you are bothered by the following, you may use bananas, extra helpings of white potatoes, sweet potatoes, and tapioca. For between-meal snacks, try potato chips, milk, cheese, dates, apples, pears, or oranges. Potato "breading" flour may be obtained at specialty stores and makes a good dredge for meats and excellent gravy. Fresh or canned fruits or Jello, tapioca pudding, ice cream, and custards are suggested as desserts. Cornstarch puddings are permitted. Cornflakes may be rolled into crust for a pie.

Potato flour, fine or granular, may be obtained very often at specialty stores or through Potato Products Corporation, Grand Forks, N. Dak. Arrowroot flour may be purchased from Chicago Dietetic Supply House, Inc. 1750 W. Van Buren St., Chicago.

"Safemix" is a flour that may be obtained (with recipes for its use) from American Dietaids Company, Inc., Yonkers, N. Y., or through your druggist. It contains soybean flour and potato flour.

Read labels on prepared foods.

Follow this avoidance program for —— days. Then add wheat (not the other grains) in extra large quantities. Good test foods include Cream of Wheat, Wheatena, pie crust, biscuit, and flour-thickened soups or sauces. Force-feed wheat for a full seven days, watching for increased symptoms, especially from the fourth to the seventh day. Stop using wheat at once should there be any signs of illness in the one week test period.

WHEAT-EGG-FOWL-MILK DIET

You are allowed to eat only things containing the following ingredients. The addition of spices, flavorings, or other foods is not permitted, except as specified. You may have: wheat flour or whole wheat or white bread of a brand tested previously; egg white and yolk; fowl (chicken, duck, turkey, chicken livers, and giblets); milk, plain, with no vitamins or flavorings added; butter, cottage cheese (no other cheese), cream, and whipped cream; sugar and salt; water; any vegetable oil or shortening, as Crisco, Wesson oil, Mazola, or soy oil; butterscotch or vanilla cornstarch puddings or pearl or Minute tapioca; Knox gelatin and plain tapioca; and carmelized sugar or butterscotch homemade flavor.

You may use the afore-mentioned in such forms as bread, biscuits, toast, crackers, cakes and cookies (if these are homemade and no flavoring other than sugar, salt, or caramel is added), waffles, pancakes, muffins, custards, omelettes, custard or cornstarch pudding pies topped with whipped cream, marshmallows, and hard candy (all made with the aforementioned items only). You may miss your usual morning coffee or other beverages and may develop a headache from stopping use of coffee. If this should occur, ask for a caffeine prescription to relieve it.

Use salt and soda to brush the teeth as sometimes the flavoring of the usual toothpastes or powders is the cause of trouble.

As there are no fruits or vegetables in this diet, you may feel "heavy" or constipated. A tap water

enema, mineral oil, or plain unflavored milk of magnesia at bedtime may be taken.

BASIC ELIMINATION DIET

The following diet is prescribed for —— days and should not be continued longer without further consultation. Please bring this list with you on each visit. Eat only foods listed. Do not eat mixtures of foods or canned or processed foods unless you are sure all the ingredients are included in the list. You may have:

Beverages—tea and synthetically flavored Kool Aid. Add Knox or A & P gelatin to allowed fruit juices for extra food value

Cereals—use fruit tapioca or hash-browned potato instead of cereal

Fruits—apricots, cranberries, peaches, pears, prunes, cherries, and plums (no raw fruit—cooked or canned only)

Fruit juices—apricot nectar and juices of allowed fruits

Meats—beef, lamb, veal, and beef liver. Add only salt in preparation

Vegetables—carrots (raw or cooked), beets, asparagus, squash (yellow, winter, acorn, and zucchini), white potato, sweet potato, lettuce, artichoke, avocado, okra, salsify (oyster plant), and eggplant

Miscellaneous—salt, sugar (brown, white, or maple), baking soda, Karo syrup, maple syrup, Mazola oil, Wesson oil, cream of tartar, vanilla extract, Royal baking powder, citric acid, and butter

Use no tooth paste—brush teeth with salt and soda or powdered chalk

Breakfast—Suggested Menu

Fruit—apricot nectar, peach, pear, or carrot juice, and stewed apricots or prunes

Starch—hash-browned potato, fruit tapioca with allowed fruits, water, and tapioca

Meat—beef, veal, lamb chops or patties (cold slices of allowed meats but no prepared meats), homemade corned beef hash, and dried chipped beef

Jam—peach or apricot preserves

Lunch or Dinner—Suggested Menu

Meat—lamb, beef, or veal chops, steak, or stew with allowed vegetables (broiled, boiled, or roasted, providing only salt is added; no onions, peppers, tomatoes, or mushrooms)

Vegetables—white or sweet potato (baked, boiled, candied, fried, or mashed with butter and hot water) and any allowed vegetables with salt, Mazola oil, Wesson oil, or butter

Salad—any of allowed vegetables, molded with plain gelatin or with dressing made of Wesson or Mazola oil and salt

Soup—beef or lamb broth cooked with allowed vegetables (no canned or restaurant soups)

Dessert—tapioca cooked with water, sugar, maple or Karo syrup, and fruit

Beverage—tea

Between Meals

Juice with Knox or A & P gelatin (stir and drink), dried apricots or prunes, butterscotch made of sugar and butter (only), rock candy, and pure plain maple sugar

Fruit Tapioca—Recipe

2½ cups canned fruit juice and water
4 tb. Minute tapioca
½ cup sugar
¼ tsp. salt
1-1½ cups chopped or pureed apricots, pears, or prunes

Combine fruit juice and water, Minute tapioca, sugar, and salt in a saucepan and mix well. Bring mixture to a boil, stirring constantly. Remove from fire. Do not overcook. Cool, stirring occasionally. Mixture thickens as it cools.

For caramel cookie and other recipes, see "Allergy Cooking" by Marion Conrad (Thomas Y. Crowell Company, New York, 1955).

NOTE. In adding new foods to the diet, stop using any new addition immediately if any increase in adverse effects occurs, regardless of probable cause. Do not add a new food if you are unwell from a cold or are still upset from a previous food addition. New foods are added in approximately double the usual intake, taken daily for the test period except as otherwise specified.

PRESCRIPTION FOR AVOIDING HOUSE DUST

House dust in an allergic sense consists chiefly of protein particles from stuffed articles, mold spores, and the dandruff-like scales of animal hairs. Silk, tobacco, cosmetics, and insecticides are also troublemakers. Other sources of dust are: feather, kapok or cotton pillows, mattresses, box springs (because of the padding present), overstuffed chairs, padded chair seats, fiber-hair rug pads, quilted cotton mattress pads, stuffed toys, furs, pet animals and birds, quilts, comforters, and collections of lint or dust that have been allowed to become moldy. The latter is especially apt to be found in heat ducts of air-heated homes, in radiators, in backs of closets, and in the headings of Venetian blinds. New wool blankets are apt to have enough dander scales on the fibers to cause trouble. It is virtually impossible to remove the allergenic dander from wool-filled quilts, wool interlining, and sheared sheepskin (mouton trim, as on collars, jackets, some toys, and slippers).

The allergist is seldom concerned with lint dust from refined fabrics such as sheets, cotton clothing, and the kind of wool found in outer clothing, or from soot, chalk, sand, or yard dirt. Old, well-washed or dry-cleaned wool blankets are usually acceptable allergically although contact with them sometimes irritates a tender skin.

Housefurnishings. Such common allergy-inducing furnishings as down cushions and fiber-hair rugs should be eliminated everywhere in the house. Wool carpets sometimes cause trouble. Foam rubber or a synthetic fiber such as nylon, orlon, Dynel, or Dacron may be substituted as filling for pillows, cushions, and toys, provided the material is clean and the object is not housed in a dusty or moldy place. Even nonallergenic stuffings can pick up dust in time and they do not remain safe indefinitely. Foam rubber is allergy-safe for only a few months, particularly in a high-humidity climate, because the small voids in the foam pick up lint dust and provide breeding places for mold spores.

It is necessary to be critical and inquisitive in buying products sold as nonallergenic. So-called foam rubber chairs are usually not all rubber foam construction but have fillings of ordinary padding underneath. Foam rubber pillows cannot be successfully washed because they become moldy before they are completely dry. Where it is not feasible to make a substitution, the offending item may be sealed off in an airtight casing.

Only a few people have serious enough allergies to warrant dustproofing all household effects. However, it is important to completely dustproof the bedroom. Here, exposure to stuffed things is unusually high, and, moreover, a large percentage of each day is spent in this room.

The Bedroom. The first step in giving yourself an allergen-free bedroom is to put plastic or airtight casings on all stuffed objects such as mattresses, box springs, pillows, and toys, or else substitute all rubber or synthetic fiber materials. Either step must be done completely. A foam rubber topper on a mattress is useless. Even the usual plasticized crib mattress is inadequate. Because dust and mold particles are miscroscopic in size, ordinary pillow slips or cloth mattress covers are not effective screens in keeping the atmosphere from being contaminated with allergens. To dustproof one bed and not another one in the room is also wasted effort. If the seams of the plastic casings are not sealed airtight, make them so with flexible collodion or clear nail polish. The zipper or other closure must be sealed with adhesive or freezer tape along its entire length after excess air has been pressed out of the casing. In an emergency, a pillow can be made by stuffing sheets or towels into a pillowcase, or the head of the bed may be elevated on blocks to serve the same purpose.

The box springs that are sold with foam rubber mattresses usually are padded with ordinary paddings and must be encased. In covering box springs that have legs attached, unscrew the legs, slip the casing on, and screw the legs back on through the casing. Mattress casings, obtainable in many department stores, fit box springs that are less than 7.5 in. top to bottom. Inexpensive plastic box spring casings for deeper springs are harder to find. Try the large department stores in New York. Custom-made casings are made of more durable, pleasanter-feeling material and fit exactly. Their initial cost is three to four times as much as clear plastic casings but they wear so much longer that they are cheaper as well as more comfortable in the long run. A plastic casing over open coil springs is a good idea but should be used over a cloth cover to protect the plastic from exposed ends of wire. Plastic cases can be made more comfortable by placing terry cloth (towel material) between the plastic and the bottom sheet or pillowcase. It may be held in place on the mattress by sewing the corners of the material like those of a contour sheet. An extra contour sheet may be put over the terry cloth to hold it in place on the mattress and the usual lower sheet may then go on top of this. Such a plan saves investing in more than one contour sheet, yet does the job.

If there is hot-air heating, the next step is to place fiberglas or similar filters over the bedroom heating ducts. The thickness of the filter should be ¾ to 1 in. depending on heating demands. The filter may be cut to the size of the wall opening and wired to the back of the louvered wall grill, which is then replaced frequently enough so that it does not get clogged with dirt. Do not put filters over wall ducts except in the bedroom, as this may create a fire hazard.

Next, all movable objects should be removed from the room and its closet. A complete damp-wipe cleaning is done to remove all traces of dust from the room. This should include light fixtures, walls, radiators, if present, baseboards and mouldings, furniture, closet, and floor. Paste wax may be applied to the floor.

Then, bring back only freshly cleaned objects—clothing, bedding, Venetian blinds, curtains, mirrors, and so on. Keep clean-enough-to-wear clothing in some other closet until it has been cleaned again. Plastic or paper bags should be used for clothing stored in the bedroom closet. Small washrugs solve the floor-covering problem. Plastic or paper or wooden tops over troughlike Venetian blind headings minimize this dust catcher. Collections of books are best kept elsewhere or in glass-doored bookcases. It is easy to keep a radiator clean if a sheet envelops it and it is changed every week or two.

Keeping the Bedroom Clean. Clean the bedroom with a damp cloth or nylon mop. Endust may be used on dustcloth or mop if desired. The door should be kept closed especially during the day (family activity stirs up dust) and when the vacuum cleaner is in operation anyplace in the house. Place a door check closing device on the door.

Never bring a vacuum cleaner into this room. Vacuum cleaners pick up dust from other rooms in the house, store this in their bags, their filters, and hoses, and then blast air through that dust, carrying some of it out the exhaust into the room being cleaned. This kind of dust is more harmful than the lint dust in the dustproofed room. If the patient must use the vacuum cleaner elsewhere, a dust respirator or dampened gauze or cloth mask should be worn over the mouth and nose at this time.

Feathered or furred things (dead or alive), quilted clothing, flowers, sachets, and insecticides must be kept out of this room. Keep tobacco out if tests show sensitivity to this. By all means keep pets out of this room even if you are not now allergic to them.

Pet animals and birds offer special problems psychologically and allergically. If there are any living with you now, or that in the past have lived with your furniture (their dander may remain indefinitely after they have departed), be sure to report them so that tests can be made for sensitivity to that kind of hair. Train pets to sleep outdoors or in the basement. Clothing that has been in contact with animals should not be brought into the dustproofed room.

Odors. Things that smell should be kept out of the bedrooms. Keep mothballs or crystals entirely away from the living quarters. Paste wax for wood floors is preferable to liquid wax, principally because it does not have to be applied so often. Smoke, fresh paint, perfumes, and insecticides usually aggravate allergic trouble, sometimes severely. These things cause trouble by irritation regardless of the underlying cause of the allergy. Men are often bothered by perfume in aftershave lotion, hair dressings, and

soaps such as Dial and Cashmere Bouquet among many others.

Perfumes, colognes, sachet powders, bath salts, hand lotions, and the like should be avoided by those having active hay fever or asthma, and should be used only intermittently at other times. Unscented cosmetics are especially desirable for women and are made for allergic individuals by Almay, Marcelle, and Allercreme companies. A "nonallergenic" label is not enough—the product must also be "unscented." Most women with hay fever use just the unscented lipstick and underarm deodorant as minimum supplies for a limited season. Similarly, when allergies are active, men should avoid Bay Rum, witch hazel, face or bath powder, and aftershave lotion (use 1 part ethyl alcohol to 4 to 5 parts water instead).

POLLEN AVOIDANCE

Pollen is a fine yellow dust that comes off plants especially early in the morning when the sun first strikes them. Much (but not all) pollen is swept several thousand feet into the air and then settles back to earth after sundown. That is why you have more trouble in mornings and evenings and should plan to stay indoors at these times particularly. Naturally, the closer you are to the plant source of pollen, the more trouble you will have. In hay fever season it is not advisable for the hay fever victim to take a drive in the country, to cut down the weeds in a nearby field, or to take a trip to areas having excessive amounts of pollen. If you are sensitive to ragweed, stay out of the Midwest in hay fever season. It is ideal for such a person to take a trip to a ragweed-free area between Aug. 25 and Sept. 10 (the Adirondacks, Palm Beach area of Florida, West Coast, Europe, and so on).

If you cannot go away, you can still cut down your exposure to pollen by remembering that the more outdoor air that strikes you in the face, the bigger your particular load of pollen will be. So close the windows and especially the air scoops on the automobile as you drive. Do not sit under a fan. Avoid drafts. Keep the windows closed (especially in your bedroom). If your hay fever season occurs in very hot weather, ventilation and cooling can be safely achieved by one or a combination of the following:

1. If you have a table fan by a ½ or 1 in.-thick fiberglas air filter (same as used in air conditioners or hot air furnaces) for $1 to $2. Obtain a large cardboard carton and completely open one side. Cut a hole in the opposite side a little smaller than the filter. Place the filter inside the box so that it completely covers the smaller hole. The open back of the box is pushed against the window. Any space in the window not covered by the box is then closed off by air-impervious material. The fan is placed inside the box behind the filter to force fresh air into the room.

2. Air conditioners are nice if you can afford them. Their filters should be of fiberglas type, not the "permanent mesh" type. Recirculation of room air is advantageous in improving their pollen-removing efficiency.

3. Blower systems from furnaces are apt to blow considerable dust from the ducts. Minimize this by mounting a "cut-down" ⅜ to ½ in.-thick fiberglas filter against the back of the louvered grille at the room entry points. It may be wired to this so as not to fall back in the duct.

4. A fan may be directed at a piece of ice to cool a closed room. Papers and a plastic or rubber sheet under the tub help catch condensing water. Keep away from the direct cold draft.

5. Other filters are also useful, such as multi-ply cellulose and electrostatically charged plates. If you are interested, ask the physician about them.

If you have an exhaust fan it is important that this not be in the bedroom as it will suck in dust from other rooms in the house. Do not use an exhaust fan during the pollen seasons because it sucks in air heavily laden with pollen.

"Personal" filters, for unavoidable dust or pollen exposure, such as a mask, may be worn over nose and mouth. A paint sprayer's mask, or dust respirator consisting of felt and a rubber exhalation flutter valve, is useful. In a pinch a moistened doubled-up man's handkerchief or hospital-type gauze mask may be used. Filters that fit inside the nose are impractical and do not keep pollen from entering the lungs.

Dry laundry indoors. Outside air leaves pollen on it.

Avoid fresh flowers. Many of them have pollen much like ragweed pollen and they make hay fever worse, some also carry irritating scents.

The Great Historical Challenges in Medicine*

Félix Martí-Ibáñez, M.D.

WHAT COUNTS IN THE LIFE of men and of nations is not so much their achievements as the challenges that cross their path and particularly the way they face them. In this sense, the history of our seven symposia is the history of the great challenges encountered by antibiotic medicine and of the way scientific investigators have faced them.

At the first great symposium of all, held more than 2,000 years ago at the house of Agathon in Athens, by the light of torches that sparked the wine goblets into a myriad of rubies, Eryximachus the physician defined medicine to the other guests, among whom was Socrates, as "the study of the love affairs of the organs of the body." In like manner, we might say that at these annual symposia we have listened to the love affairs between antibiotics and germs, with the latter behaving like frivolous girls, now being vulnerable, now resisting the antibiotic onslaught.

At first sight, these symposia may appear to summarize every autumn the rich scientific harvest of the previous year. But I would say it is the other way round. Getting together here, interchanging impressions, inquiring into one another's work, dreaming together, and sharing our hopes—this to a large degree is what determines the harvest of discoveries to be reaped the following year. More than an account of what you have done in the past year, this symposium each year is like the hoisting and unfurling of an inspiring banner that galvanizes you scientists to further action, to do still greater things in the year to come.

It is fitting to inquire if the new scientific challenges uncovered at each symposium are just another facet of our times, which, like a rose with its thorns, are so full of promise and yet bristle with problems. History tells us that medicine obeys the law of action and reaction, wherein each new scientific step, each medical discovery, starts a chain reaction of challenges that the physician must resolve if he wants to ensure continuity in the history of medicine.

In mythology each new victory of Hercules during his Labors, and each new exploit of Ulysses during his Odyssey across the azure waters of the Mediterranean, led only to new perils that the hero had to overcome if he wanted to reach the haven of his dreams safe, sound, and victorious. In science, each conquest engenders new menaces to itself, and the scientist must stand ready to overcome these menaces, if his progress is not to be deterred by setbacks, like the tortoise in the fable.

Thus, science, like human life, is an operation that moves forward. Like life, science also must be fiercely faithful to itself and to its vital authenticity. It must be faithful to the duty of facing its repertory of problems. In life, as in science, one cannot shelve, shirk, or evade problems. They must be confronted with a serene face and a valiant soul, as problems are wont to flee and vanish before the bold tread of the fearless fighter, just as phantoms in a haunted castle vanish before the first glow of dawn that sheds light and life upon everything.

* Presented at the Seventh Annual Symposium on Antibiotics, Washington, D. C., Nov. 4, 1959, and published in Antibiotics Annual 1959-1960, Antibiotica, Inc., New York, 1960.

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THE SEVEN GREAT CHALLENGES IN THE HISTORY OF MEDICINE

The emergence of challenges on the road of contemporary medicine is nothing new. At every period in history the physician has been beset by tremendous problems, which he has resolved by dint of his genius and ingenuity. We could reduce to seven these great historical challenges to medicine, just as we could reduce to seven contemporary medicine's responses to such challenges, and again to seven—always the magic number—the spiritual virtues of the scientific investigator, on whose ability to respond to such challenges medical progress depends.

The first great challenge arose in the world that emerged from the neolithic world of the flint. "River civilizations" sprang up on sun-blazed steppes, and brown-skinned peoples, originally from Asia, condemned to annihilation by the scorching sun and whirling sands, struggled desperately to survive in the wilderness. Such were archaic Egypt and Mesopotamia when man answered the challenge of the shapeless world around him, peopled by invisible presences and demons, with the sheltering geometric architecture of pyramids and ziggurats. That was also the time when medicine men tried to master the invisible forces of nature and disease by means of the first pseudoscience, magic medicine. The archaic medicine man resorted to the stars, the livers of sacrificed animals, and auguries to safeguard the life of his people against the demons that caused the spiritual possessions and fevers we now call psychoses and infections respectively.

The second great challenge came on the golden Greek peninsula and its sun-blistered lemon-and-olive-groved islands, where the first great philosophies and religions of the western world were born. There, more than 2,500 years ago, man for the first time in history dared to face the intellectual challenge posed by the nature of the universe, of man, and of disease. The Greek philosophers, many of them physicians, were the first to use the magnificent instrument of thought to awaken man's conscience and dignity, and to formulate the concept of disease as a natural process that could be healed by empirical and rational means.

The third great challenge was sheltered by the gloomy skies of the Middle Ages, when the Black Death and other great pandemics threatened to destroy the human race. The men who met this challenge were physician-priests, shut away in the only places where medicine could still be practiced, the monasteries, which, stationed along the great routes traveled by pilgrims, crusaders, and merchants alike, were a dynamic combination of news agencies and centers of bookish research. Theirs was strictly a "book medicine"; nevertheless, in their fight against epidemics and other manifestations of nature's destructive forces they created hospitals, universities, and public health measures, which, together with the Gothic cathedrals and the "Divine Comedy," were the great medieval contribution to civilization.

The fourth challenge arose in the Renaissance, a period throbbing with the parallel urges to explore the human body and the horizon stretching beyond the seas, both of which until then were terra incognita. The fever of the navigators to discover the lands asleep beneath the virgin stars of the western sky was matched by the fever of Renaissance surgeons and anatomists to discover with their scalpels the mysteries hidden beneath the human skin. The challenge posed by the mysterious structure of the organic fabric was answered by hands urged on by the bold and rational thought of the Renaissance surgeons and anatomists.

The fifth challenge was to decipher the secret of the physiology of the human body and its mysterious functions. This problem was unraveled in the Baroque period, when the motion and emotion characteristic of Baroque art were reflected in the concepts applied to scientific investigation, as in the discovery of the circulation of the blood, which was to make *anatomia animata* in space, just as Baroque embryology made *anatomia animata* in time. When dynamic physiology replaced the static anatomy of the past, the way was opened for a series of discoveries in circulatory, digestive, and nervous physiology, on which modern medical science is founded.

The sixth challenge was presented by disease therapy, which at the end of last century was still as empirical as it was 2,000 years ago. Clinical and laboratory investigators answered this challenge with immunobiological, endocrine, chemical, and, more recently, antibiotic therapies, calling for a naturalistic and experimental criterion in the treatment of diseases.

The challenge of our own time is to decipher the nature and the biochemical sub-

strate of disease and its natural history, the biological cycles of the pathogenic agents, the enigmas of genetics, and the secrets of ecology, and thus be able to anticipate the biological destiny of man and to make of therapeutics a subtle diagnostic key with which to unlock the last door opening to the threshold of life.

THE CONCEPT OF BIOCHEMICAL RESPONSIBILITY

We have progressed therefore from the primitive anatomic notion of disease, which placed all responsibility on one organ only, to the physiological notion, which accepted a multiple organ functional responsibility, and from there to the biochemical notion, which, ignoring the primitive concept of the diseased organ and the later concept of multiple alteration, concentrates instead on biochemical responsibility. This means accepting the totality of the pathological disorder, which, though initially it springs from the alteration of one organ, is not limited to the boundaries of that organ but adheres to the concept that the seat of every disease, however limited it may seem, is the whole body, and the disorder is a general disturbance of all the organic humors.

We have thus returned to the original humoral notion propounded more than 2,000 years ago by Hippocrates, which was later displaced to some degree by Galen's partly anatomic concepts. This is one of the paradoxes in the history of medicine. It took many centuries to agree that diseases did not float mysteriously within the body but were localized in what was successively described in the course of history as organ, texture, fiber, web, membrane, tissue, and cell.

In contrast, we are nowadays reverting to the humoral idea of disease, but with the difference—on which rests the progress of our knowledge—that we now agree that diseases, including psychiatric disorders, are localized in organs but affect the totality of the organism due to the efficient correlation mechanisms of the body, particularly the endocrine and neurovegetative systems, and that mysterious, pallid tissular jungle known as the diencephalon and the hypothalamus-pituitary-adrenal axis. This jungle is in our century the site of enthralling explorations that, with the aid of biochemical tools, are destined to make discoveries in the inner space of man more extraordinary than those that rocket ships may make in outer space.

MEDICINE'S SEVEN ANSWERS TO THE CHALLENGE OF OUR TIME

The challenge therefore that medicine faces today is to protect health and prevent disease by increasing its knowledge of the processes of health and disease. In facing this challenge, modern medicine has established the basic problems it must first solve, as follows: first, to know the biochemical substrate of health and its alterations, including that of mental processes—this knowledge, which already enables us to look into the chemistry of joy and sorrow and of the genius and the artist, will provide a dynamic tool with which to approach the promotion of health, not from afar, as in the past, but from the innermost redoubts of its formerly impregnable citadels; second, to know thoroughly the processes of growth, convalescence, aging, and death, so as to be able to rehabilitate the diseased, to safeguard the development of the human being, and to prolong his life, if not for the purpose of realizing Faust's utopian dream of immortality, at least to ensure that man's twilight may be as bright as possible, delaying the final fall of the mist-shrouded night; and, third, to know the biochemical processes underlying the etiology and pathogenesis of the three great groups of diseases: neurosis, biosis, and sclerosis, that is, functional, organic (including the infectious), and degenerative diseases, for this is the only way we can get to know them, prevent them, and cure them.

To solve these problems, contemporary medicine has already started on seven different tracks:

It is using biochemical, physiotherapeutic, and dietetic resources to strengthen normal human physiology and organic defenses as the best means of converting the body into a fortress, walled against the invasion of disease and capable of resisting all sieges or of expelling any invader that may succeed in penetrating into the human citadel.

It is applying ecology in providing man with the most suitable environment to safeguard and improve his health, his well-being, and his culture. Pursuing this end, "portable" environments with adequate food and artificial climate have already been created to enable man to travel to the polar zones, the tropics, or in cosmic space, carrying with him his most favorable ecologic environment.

It is combating the cause of disease—germs, toxins, traumas, stresses, radiation, noxious

foods, and noise—by trying both to prevent them and to eradicate them as they spring up. Our aerocosmic age has brought about the vertiginous development of a new discipline, space medicine, whose greatest value lies in its findings not so much about man's life in cosmic space as about man's normal physiology.

It is synthesizing new drugs to treat "new" diseases (alterations of the collagen system, the ABD syndrome, Korean icterohemorrhagic fever, radiation disease, and antibiotic-resistant infections) native to our times, which are man's penalty for the progress of civilization.

It is using new drugs to treat "old" diseases, replacing the bow and arrow type of medication with weapons of "atomic" scope, such as antibiotics, ataraxics, new vaccines, and the more recent diuretics and anticholinergics.

It is discovering different techniques to study those processes of the body still unknown, in the hope of forcing the organs to reveal their secrets in that mysterious language of theirs that is translated into data, figures, microstructural images, and laboratory reactions. These new techniques have also revolutionized the teaching of medicine and medical communication by placing at their service a dazzling armory of electronic resources.

To diagnose diseases still unknown, it is seeking and investigating new substances, such as the experimental cancerogenic agents, the new cholesterol solvents, and the hallucinogenic drugs that are now being used in mental diseases and that may disclose some of the secrets of schizophrenia and perhaps even the roots of artistic genius.

THE DANGER OF CREATING A MYTHOLOGY OF SCIENCE

These, then, are the historic challenges that medicine faces today, challenges that must be met not by philosophers, priests, or visionaries as in the past but by scientific investigators, men who have been driven into research by their search for truth and for their own personal destiny.

If that brave infantryman of medicine, the practicing physician, must daily provide prompt answers to the problems of the moment of his patients, since their lives may depend on his decisions, the medical investigator must provide more permanent answers to general medical problems, answers in which he must even anticipate the future. If clinical medicine must answer individual challenges of a temporal nature, medical research must answer universal and eternal challenges.

Never before have investigators had at their disposal so many and such good tools and equipment and so much economic aid with which to face medical problems. Even the popular support that in every period in history has invested great heroes with a golden halo is now accorded to investigators.

But the present formidable advance of science entails the danger of superimposing a mythology of science over contemporaneous scientific thought, a danger that, like a storm cloud, is soaring across the sunlit scientific panorama of our time.

What do I mean by mythology of science? Well, we know that ancient mythology was characterized by a monstrous overestimation of the hero's powers. The mythological hero was credited with supernatural powers, superhuman energy, unparalleled bravery, and extraordinary determination, which enabled him to do anything, to overcome everything, and to master all things and beings. More impressive than his exploits was the extraordinary fact that he always faced impossible enterprises with the foreknowledge that he could accomplish them. The hero's weapons were equally overevaluated and had an importance equal to that of the hero himself. Siegfried's sword and Apollo's arrows were considered invincible. Finally, each individual triumph of the hero was so overestimated that his final goal was lost sight of. Each successive victorious step was confused with the accomplishment of the hero's original mission. The labors of Hercules became more important than their original motivations; Ulysses' voyage because of its epic magnitude eventually obscured its original purpose: to return to the loving arms of Penelope.

However, mythology was not made only by the poetic bards in the days of Homer and classical Greece. Mythology has continued to be made all through history, even in medicine, and the result has always been the same: the myths, which are only projections of man's hopes and fears, just as legends are history distorted by the imagination, eventually supplant reality. This is what happened with the myths created around Imhotep and Aesculapius. Imhotep actually existed 3,000 years before Christ, but 25 centuries later he was a god; Aesculapius started as a prince of Thessaly and ended centuries later as a god of

medicine venerated in hundreds of temples throughout Greece.

Man to this day continues to create mythology, because he simply must have heroes to protect himself against the tedium of life, and because he still needs to project his hopes and fears onto extraordinary beings and objects. Recently, the psychologist C. G. Jung demonstrated in a magnificent study that "flying saucers," whatever their physical origin, are crystallizations of a popular psychic projection of the myth that intelligent forces do exist in cosmic space. In such sense they are a "modern psychological myth."

Likewise, in medicine a dangerous mythology of science is now being created. This mythology has the same characteristics as the mythology previously mentioned, that is to say, overevaluation of the almost supernatural power of the hero—in our case, the scientific investigator; overevaluation of his weapons or tools—in our case, technology; and confusion of his partial triumphs—the conquests of applied science—with his final goal, which is a better knowledge of nature and of man so as to be able to protect his health and prolong his life.

An example of the first characteristic is the unfortunate popular publicity nowadays given to the scientific investigator, which leads to the belief that every investigator who has developed a new substance has already conquered the disease for which it is intended, or that each new drug—ataraxic, steroid, toxoid, or antibiotic—is the definitive therapy for a disease. An example of the second characteristic is the almost religious worship of all technological advances in electronic instrumentation, laboratory techniques, and the rest, while the object for which they are destined often takes second place. An example of the third characteristic is the recent overestimation of certain drugs, for instance, ataraxics, which are really only a key to unlock a few doors in the unexplored castle of the psychoses.

We must be on guard, lest this mythology of science grows roots and takes the place of reality, and lest excessive faith in the investigator's invincibility and the power of his technological weapons and excessive glorification of practical scientific victories end in diverting science from its true path. The frequent sight of his countenance mirrored in the pools of technological progress might make the investigator forget to keep his eyes fixed on the broad sunny horizons that are the true objective and ideal of science. Each of the investigator's triumphs is a step forward in the march of progress, but technology, that is to say, applied science, can never replace basic science, wherefrom flows, like water from a spring, the clear philosophical stream that guides man on his way through history.

Above all, it is necessary to banish the growing tendency to experiment for the sake of experimenting, without a definite philosophical purpose. Though Claude Bernard recommended hanging up imagination with one's hat upon entering the laboratory and retrieving them both only upon leaving, he himself never failed to exercise his scientific imagination, a luminous and almost poetic vision of what he wished to attain by his experiments, which he wore on his brow like an invisible hat from which he was never separated.

Experimentation is the foundation of science, though it is not its *raison d'être* as devotees of the mythology of science claim. It must at all events be guided by ideas, by hypotheses, and by intuitive vision of the ideal goal that it wishes to reach. Should it not be so guided, the now developing hypertrophy of "pure" experimentation will ultimately lead to atrophy of the investigator's imagination.

The best remedy against the danger of mythology is for all those dedicated to science continually to remind themselves with humility, as the Carthusian monks continually remind themselves of death, that both the investigator and technology have their limitations. Although the answers we have found to concrete problems up to the present have been dazzling, the greatest problems remain unsolved after 6,000 years of written history.

The mythology of science, that is, excessive credence in what science can do for humanity, may continue to grow among the general public, but I feel sure that we scientists will try to maintain a human nonmythological attitude, because we know that without it there can be no real progress in the field of science. I believe this because, quite apart from the dazzling mythological armor in which the public arrays the investigator, the investigator does possess certain virtues, invisible to the public, that give him inner stature and in which reside his true greatness and that of his work.

THE SEVEN VIRTUES OF THE MODERN SCIENTIFIC INVESTIGATOR

Everyone knows the technical resources to-

day available to the investigator in accomplishing the formidable task entrusted to him. I shall not quote statistics, for though I sometimes use them I dislike them strongly. Instead, I shall mention the spiritual resources of the investigator, his seven capital virtues—as I called them in a recent study on Carlos Finlay, "The Pasteur of the Americas," discoverer of the mosquito's role in yellow fever —virtues that hold the key to his greatness and the justification for looking forward with optimism to medicine's response to the great challenges of our time.

History, including that of medicine, is made by men, and on the number of spiritual carats such men possess depend the possibility and magnitude of their triumphs.* But even in the clean, fresh climate of science, one needs a purpose, a method, and a spirit. I have already spoken of the purpose and the method of contemporary medical science. Its spirit is that of the men who are today making that science. Benjamin Franklin said, "All mankind is divided into three classes: those that are immovable, those that are movable, and those that move." Scientific investigators are those who move, who do things, who express their greatness in actions of vast consequence to humanity. On their virtues depends the progress of science. The best scientific machine or instrument, the most perfect laboratory, the most advanced statistical methodology, and the latest electronic advance all would be worth nothing without the man who, in the laboratory, clinic, office, or library, contributes his life so that medicine may move forward. Without these men no history of medicine could be made, just as no good building could be erected without pillars to support its foundations.

Foremost among the investigator's virtues I place goodness. A castle is as strong as its foundations. Every great man, every great investigator, begins by being a good man. The humaneness of daily life must overflow into the humanism of the investigative genius. In no profession as in medicine is it so important to be a good man. "Science without conscience is nothing but baseness of the soul," said that lapidary of eternal truths, Montaigne. The true investigator is an indefatigable galley slave of medicine, who, renouncing the glitter of easy success and tempting profit, chooses the troubled seas of investigation instead of the calm harbors. Modesty is usually the inseparable companion of such goodness.

The second quality is greatness. Greatness is simplicity. This has been so from Hippocrates to Fleming. A greatness that is an aristocracy of the spirit is the only sovereignty people can accept without relinquishing their own sovereignty. Greatness in the true investigator is to go through life doing with a simple spirit things that may benefit his fellow-beings, and building a mighty pyramid without losing his childlike innocence of soul. It is to remain indifferent in the face of indifference, and to have faith in his convictions, even during the interminable night of failure, certain that the dawn will come. It is to accept life—as did El Greco in Toledo—as splendor and radiance, lighting the shadows of his laboratory with his own inner light.

Sometimes genius is added to these qualities. While in art knowledge is spasmodic and nonaccumulative, in science it is systematically accumulative and keeps on replacing itself. A Botticelli, a Cervantes, or a Beethoven—each in himself is a complete cycle who needs no predecessors and leaves no school. Hence a work of art—symphony, statue, or painting—is immortal, while the life of a scientific work —report, address, lecture, or research—is ephemeral and always liable to be superseded by a more recent work.

In art, genius is the rebel artist who creates his own universe in its entirety; in science, genius is the rebel investigator who excels his universe by applying the spark of his intuition to already existing knowledge. Genius is intuition, but it is also logic in the service of a fervent vocation, displayed at the right time and in the proper place. Besides quality, genius is also quantity, as borne out by the prolific work of Paracelsus, Harvey, Hunter, Freud, and Fleming. The true genius rarely makes a single discovery. The great investigator, generally, makes many.

Add to that the spirit of inquiry in which experimenting is the indispensable complement to theorizing thought and not a means for exploding sensational intellectual fireworks. Patience in waiting and quickness in thought distinguish the investigator. Often the genius' intuition flashes suddenly, but the true investigator will, if necessary, spend years in verifying his spark of truth, reconciling noble

* Science has progressed because it stepped from what was its basis in the past, that is, qualitative impression, to its present basis, which is quantitative measurement. If to make art is to create, to make science is to measure.

haste in his endeavor with patience in its confirmation.

Lucidity is another quality indispensable in the investigator, because the style is the man, or, in other words, man in his human quality is his style. In his tribute to Claude Bernard, delivered in Paris on April 3, 1879, the great historian Ernest Renan said of Bernard's style words that could be applied today to any investigator:

> Human intelligence is a whole so well united in all its parts that a great mind is always a good writer. The true methods of investigation, given a firm and healthy judgment, embrace the solid qualities of style. . . . The standard of good scientific style is lucidity, perfect adaptation to the theme, complete forgetfulness of self, absolute abnegation. That is also the standard for writing well, whatever the subject. The best writer is the one who develops a great subject and forgets himself in order to allow his subject to speak for itself. . . . He uses words like a modest man uses his clothing, to cover himself. . . . He thinks, he feels, the words flow. . . .

The style of the good investigator sparkles with the diamantine brilliance and limpidity typical of the man who knows certain things thoroughly and wishes to explain them so that everyone will understand. Reading great writers, like Erasmus and Juan Luis Vives, one realizes that style is like the acrobat's tights, which cover his figure without concealing it, or like a close-fitting glove on the hand of thought. Fleming's reports are like a transparent window through which one can see unmarred by a single mote of dust the wide prairies of his thought. The creed of the true investigator is fidelity to the truth, and that means not only to seek it and serve it but also to express it in language intelligible to everyone. Finlay, Cajal, Freud, Fleming, and Osler —these men allowed no hyperbole or redundancy, and no exaggeration of concepts, to creep into their prose and cripple its scientific probity. Lucidity in style presupposes lucidity in thought, and this in turn implies clarity of spirit. A clear style, like a clean windowpane, indicates that the owner does not fear inquisitive eyes. The investigator's prose must be fluid, fresh, and crystalline like the water from a mountain brook.

The investigator is a true patriot, because he is a living part of the historical conscience of his epoch. He can look at the problems of his country and of his time with eyes both critical and loving, for the true lover does not respond blindly to Cupid's darts but loves his beloved though his eyes are wide open to her defects. The investigator's homeland grows with each of his discoveries, until it becomes a universal homeland not to be found in any geography book. The investigator is the *homo universalis* of our time and helps to promote the health of all people on our planet. He can sometimes, without leaving his home or country, delve so deeply that he reaches universal roots, preferring vertical profundity to horizontal spread, which guarantees his universality in space and his immortality in time.

Finally, the investigator possesses universality. In the address already quoted, Renan said, "Glory has something homogenous and identical. Everything that vibrates produces it. There are not various types of fame, any more than there are various kinds of light." All glories derive their rays from the same source. The investigator's glory is universal and clothes with honor all who can admire an ideal and dedicate themselves selflessly to it.

L'ENVOI

In these times of atomic and cosmic terrors, it must be remembered that, when all the mechanical marvels of the age have been replaced by others, the example of the selfless investigator will endure unshaken as an inspiration to man and peoples and as a memorial pillar for all time. On such virtues is founded my optimistic readiness to believe that the mind of the investigator, like a many-colored glass dome shedding its radiance on all fields of human knowledge, guarantees the unceasing progress of human effort.

Other speakers here are better prepared than I to describe and extol the vast intricate technical resources, instruments, equipments, and institutions now at the service of science and of the investigator. I, like a flower-laden botanist emerging from the woods, would only like to pin in your lapel a sprig of seven blossoms: goodness, greatness, genius, spirit of inquiry, lucidity, patriotism, and universality. On those seven ineffably sweet-smelling flowers is founded my belief that the investigator will solve the greatest scientific challenges that humanity has ever faced by writing opposite those dark pages of technology, which record hydrogen bombs, war-provoking missiles, and other infernal machines, those glittering pages that can be written only by the spirit of man.

Communications Therapy Program in a Veterans Administration Hospital

Ella Mary George, M.A., M.D., John L. Boland, Jr., Ph.D., and
Elizabeth M. Kevin, M.A.

TO AID IN THE REHABILITATION of patients with speech, voice, and language disorders, a communications therapy program was developed in the Physical Medicine and Rehabilitation Service of the Veterans Administration Hospital, Oklahoma City, Okla.

The personnel most actively involved in this program consist of a speech pathologist, a social worker, and a physiatrist. The physiatrist and social worker are full-time employees of the hospital, and the speech pathologist works in the hospital two mornings a week on a consulting basis. While these three persons are the most actively involved, the success of a communications therapy program depends on the understanding and help of numerous persons, both staff and volunteer, throughout the hospital, on all wards, and in many other departments.

INITIAL CONTACTS

Patients with language, voice, and speech problems are referred to the communications therapy program from all wards of the hospital. Often patients are seen on their wards within hours after injuries or strokes. Early referral of a bedridden patient is encouraged so that bedside visits by communications therapy personnel can help the patient recover his lost or damaged speech and language abilities. As soon as the patient becomes ambulatory, he is urged to attend the group therapy sessions.

Routine language and intellectual evaluations of patients with speech, voice, and language difficulties are performed by the speech pathologist. If more detailed and extensive psychological evaluations seem indicated, patients are referred to the hospital's psychologists.

Dr. George, a physiatrist, is Chief, Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Oklahoma City, Okla.

Dr. Boland is Consultant in Speech Pathology and Rehabilitation, Veterans Administration Hospital, Oklahoma City.

Mrs. Kevin is a social worker assigned to the Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Oklahoma City.

INDIVIDUAL THERAPY

Individual therapy hours are scheduled for patients who need them. Stutterers and patients with voice problems are always seen individually by the speech pathologist, as well as in the group sessions.

After surgery individual training in esophageal speech is begun for laryngectomees as soon as the surgeon permits it. When patients become ambulatory they attend the group therapy sessions, where they can practice their speech.

If the laryngectomee seems unable to learn esophageal speech, or for some reason is unwilling to learn, an electrical larynx is available to him on his ward. If he learns to use the electrical larynx, it is given to him on discharge and another is ordered for ward stock.

Hard-of-hearing patients are sometimes given individual instructions in lip reading by the speech pathologist. The group sessions are then ideal situations in which these patients can practice their new lip reading skills.

GROUP THERAPY

Every Tuesday and Friday morning a communications therapy group meets in the designated occupational therapy room under the direction of the speech pathologist. As many as 12 patients with various speech, voice, and/or language problems may be present. On any morning the group may have among its members 2 laryngectomized patients, 1 who can speak and 1 who has had surgery only a week before; 3 aphasics, 2 of whom have had cardiovascular accidents and 1 who was injured in an automobile wreck, all in different stages of recovery; 1 stutterer; and, perhaps, 1 person referred because of hearing loss. All learn to feel kinship with each other in these group therapy sessions and benefit from association with each other.

During 1956 the group therapy sessions were attended by 62 patients with the following speech, voice, and language disorders: aphasia—from cerebrovascular accidents, 24 (moderate to severe), from auto accidents or blows, 8 (moderate to severe), and from postoperative brain tumor, 4; aphasia and dysarthria—postencephalitic, 1; dysarthria—from cerebrovascular accidents, 1 (severe) and 5 (mild), from surgery of face or neck, 2, and from amyotrophic lateral sclerosis, 3; aphonia—from laryngectomy, 4; stuttering—2; articulatory disorder—from new dentures, 1; inability to read or write—1; and hearing loss—4 (mild to moderate).

The needs of each patient are different, but all participate in the friendly, spontaneous sociability encouraged during these hours. Depending on the patients present and their needs at the moment, familiar songs are sung. Each patient has a chance to talk during each hour, and often lively discussions ensue about hospital activities or various local or national events. Each person is encouraged to communicate as best he can at the moment. Patients quickly get to know each other and become interested in the occupations, families, and hospital routines of other patients.

In general, activities of these hours are similar to those described in detail by Aronson and others.[1] Sometimes the larger group is broken up into smaller groups for short periods to work on specific language and speech skills. One small group may be assigned to the social worker, another to a volunteer, and another to a medical student, all supervised by the speech pathologist.

Toward the end of the hour cookies are served with coffee or tea. Ambulatory patients are urged to help make the coffee and serve the cookies. Sometimes the first social act a patient performs after a stroke will be the act of passing cookies to the man next to him. Patient who are able are encouraged to wash the dishes and take increasing responsibilities for the activities of the group therapy sessions.

On the average, each patient is seen in the semiweekly group therapy sessions during a period of about three months. Some patients are seen only once in the group and some are seen for many months.

At first, group therapy sessions were held only for aphasic patients. Then laryngectomized patients and gradually patients with other speech and voice disorders were added. Patients with an increasingly wide variety of disorders are now being referred to the communications therapy program, and these comprise a rich clinical cross section of many and various speech, voice, and language disorders associated with a great number of functional and organic causes.

TEAMWORK

Group therapy sessions use the services of several specialists. The physiatrist, Chief of the Physical Medicine and Rehabilitation Service (E.M.G.), ensures close co-ordination and integration of all participating specialties.

The speech pathologist supervises the group therapy activities and the physiatrist and the social worker visit each group therapy session. Two to five volunteers are present at each session. Physical, corrective, and occupational therapists, plus other members of the Physical Medicine and Rehabilitation Service, as well as physicians, nurses, and other staff personnel from all parts of the hospital, are frequent visitors. Visitors are introduced, become part of the group, and participate in activity going on at that time.

The chief occupational therapist assumes responsibility for the physical arrangements for group therapy sessions. She usually participates in group activities and becomes familiar with the communication needs of the patients. She and her staff weave speech and language retraining exercises and techniques recommended by the speech pathologist into the occupational therapy treatment of the patients.

Volunteers who work in this program have themselves become quite familiar with the

general characteristics of persons with speech, voice, and language disorders. Besides supplying refreshments and participating in the group activities, volunteers often assist in language therapy and speech retraining under careful supervision of the speech pathologist.

Every effort is made to invite physicians, nurses, and key personnel from other wards and departments of the hospital to visit the group therapy sessions from time to time. These people then become acquainted with the program and they, in turn, explain its function and use to new residents and other new staff members.

Sometimes a physical therapist visiting the group session will tell how one of the patients has mastered a new motor skill. The patient then receives recognition for this work from the group and this increases his motivation in future physical therapy sessions. In this way, and in ways that are more complex, the group therapy sessions tend to accelerate the patient's entire rehabilitation schedule.

COUNSELING OF FAMILIES

In addition to the group therapy sessions for patients, group therapy is scheduled for families of patients under the direction of the social worker. The social worker is well acquainted with the rehabilitation progress of each patient and through her individual and group work with the family she can identify and evaluate the stress areas in the patient's environment. Efforts are made either to minimize or to remove problems that would effect the patient's progress in treatment or eventual maximum rehabilitation.

Group therapy sessions with families have been found to be an essential part of the rehabilitation program of patients with speech, voice, and language disorders. Families of aphasics in particular are profoundly disturbed as a result of the aphasia, which usually afflicts the breadwinner of the family, and these families often need many hours of individual and group counseling.

The social worker often finds it useful to invite the physiatrist, the speech pathologist, and other members of the rehabilitation staff to the family group hours to explain various parts of the total rehabilitation program.

EDUCATIONAL ASPECTS

Our hospital is a "Dean's Committee Hospital"—a part of the teaching and training facilities of the University of Oklahoma School of Medicine and the Medical Center. Medical students, student nurses, and others usually become acquainted with the communications therapy program through their observations of the activities of the Physical Medicine and Rehabilitation Service.

First or second year social work students are given field placement in this hospital every year. These students participate in the group communications therapy sessions as a regular part of their training. The same is true of physical therapy students from the University of Oklahoma School of Physical Therapy.

For the last several years, junior medical students awarded National Foundation fellowships in rehabilitation at this hospital have chosen to do their research projects in the rehabilitation of hemiplegics and aphasics. These students have become intimately acquainted with all aspects of the communications therapy program. They perform language evaluations and psychological tests on selected patients under supervision of the speech pathologist; counsel families; and become familiar with some of the techniques of language retraining and speech therapy.

FOLLOW-UP THERAPY

When patients are discharged from the hospital, every effort is made to help them find community facilities where they can continue to get the speech, voice, or language therapy they need.

Discharged laryngectomees are referred to the newly formed Oklahoma City Lost Chord Club, where they can receive additional speech training and can benefit from the social meetings of the club.

Aphasic patients are usually referred to the Oklahoma Foundation for Aphasia. This is a unique, nonprofit organization that helps aphasics in Oklahoma find the rehabilitation services they need in their communities. Hard-of-hearing patients are usually referred to the Oklahoma Society for the Hard of Hearing or to local speech clinics.

SUMMARY

The characteristics of a communications therapy program at the Veterans Administration Hospital in Oklahoma City are as follows:

1. Referrals to the communications therapy program early in the patient's illness are encouraged to speed rehabilitation of patients with speech, voice, and language disorders.

2. Both group and individual therapy sessions are available to persons with these disorders.

3. Communications therapy is done under the close supervision of the speech pathologist, aided by physical therapists, occupational therapists, other professional workers, and volunteers.

4. Patients with various speech, voice, and language disorders work together in the group therapy sessions. This has been found to yield better clinical results than segregating the patient according to his problem.

5. The communications therapy program is closely knit into the over-all rehabilitation program for each patient.

6. Work with families and employees is considered an integral part of the rehabilitation program of these patients.

7. Every effort is made to acquaint all hospital personnel with the communications therapy program, its facilities, and its purposes.

8. Careful referrals to available local resources are made when the patients are discharged from the hospital.

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Annual Report of the American Heart Association—1959

Sums allotted to scientific research by the American Heart Association and its affiliates since its reorganization as a voluntary health agency in 1948 have approached the 50 million dollar mark, according to the Association's annual report, published in February. During the decade just ended, "the Association has emerged as the largest nongovernmental source of support in the United States for scientific investigation in the broad areas of heart and circulatory disease."

The report notes that this status was the outgrowth of "increasingly warm support given by the American people to the annual Heart Fund appeal" conducted each February. The 1959 Heart Fund drive, which raised the unprecedented sum of $24,004,865, "demonstrated more conclusively than ever before that the independent fund-raising campaign is the most effective means by far of obtaining maximum voluntary participation and support for the fight against heart disease."

Through its policies of research support "the Association has helped create and nurture a corps of research workers in the cardiovascular field of unprecedented number and capacity. Historically this may well prove to have been the greatest single contribution to the fight against heart disease made by the partnership of laymen and professionals in the Heart Association. Certainly the existence of this body of research workers is our best assurance that the 1960's will see advances even more striking than those of the decade just past."

Through the Association's public information and education program, prevalent attitudes of fear and fatalism toward the heart diseases have been replaced by "nearly universal understanding that heart disease does not preclude a happy and productive life. This transformation of outlook is among the most significant achievements of the 1950's."

Venereal Prophylaxis for Women

USE OF A SULFATHIAZOLE-SOAP APPLICATOR FOR PROPHYLAXIS AND TREATMENT OF VAGINITIS

Ben Seid, M.D.

THE USE OF STANDARD venereal prophylactics by men has greatly reduced the incidence of syphilis, gonorrhea, and chancroid. Unfortunately, no equally simple and convenient method has been available to women. The douche following intercourse is notoriously cumbersome and unreliable.

In my experience a sulfathiazole-soap applicator (Wandex*) provides simple and satisfactory female venereal prophylaxis and is also a convenient means of treating those forms of vaginitis that come within the sulfathiazole spectrum. The medicated applicator is about the size of a toothbrush. It measures 6.25 in. in length, including the conical medicated tip, which is 2.5 in. long, and has a maximum circumference of 1.875 in. The soap tip, molded over the end of the applicator, contains 5 per cent sulfathiazole in about 2 dr. of soap stabilized with 2 per cent sodium sulfite (Fig. 1).

The antibacterial action of the sulfathiazole permits repeated use of the applicator with comparative safety, since only a small amount of the medicated tip is used up with each application. In this way, one applicator can be used up to 50 times.

For prophylaxis the applicator should be slowly inserted and withdrawn three to six times, rotating it as it goes in and out (Fig. 2). The normal vaginal secretion provides sufficient moisture to leave a soapy medicated film on the mucous membrane. The applications should be made both before and after intercourse, eliminating the need for a douche. By inserting a speculum immediately after use of the applicator, I have observed a fine layer of the soap adhering to the vaginal walls.

* Supplied for this study by Research Supplies, Pine Station, Albany 3, N.Y.

Dr. Seid a urologist, is Chief of Staff, Post Graduate Medical Center, (outpatient clinic), Chicago, and on the Urological courtesy Staff of Michael Reese Hospital.

RATIONALE

A combination of sulfathiazole and soap, used both before and after intercourse, provides an effective safeguard against syphilis, gonorrhea, and chancroid. The applicator stretches out the folds and crevices of the mucous membrane, including the vaginal rugae, and thereby brings the sulfathiazole and soap into direct contact with embedded bacteria. Sulfathiazole, a broad-spectrum sulfonamide that has shown promising antibacterial actions when tested in vitro against a wide variety of microorganisms,[1] was used in combination with mild mercurous chloride in a series of 10,006 treatments as a prophylactic against gonorrhea, chancroid, and syphilis.[2]

Sulfathiazole is the sulfonamide of choice in treating gonorrhea in man [3] and in woman, vulvovaginitis in children,[4] and gonorrheal conjunctivitis.[5] A 20 per cent solution of sulfathiazole has recently been tested in an attempt to replace the administration of 2 per cent silver nitrate in the classic Credé's method for prevention of ophthalmia neonatorum.[6] The drug is also antibacterial against Ducrey's bacillus and is effective in the treatment of chancroid.[7,8]

Soap is an excellent antiseptic and washing with soap and water is one step in the stan-

Fig. 1. Medicated applicator for female venereal prophylaxis and therapeutic vaginal applications. The 2-dr. medicated soap, measuring 2.5 in. in length and 1.875 in. in maximum circumference, contains 5 per cent sulfathiazole and 2 per cent sodium sulfite.

dard procedure of venereal prophylaxis used by the armed forces. Even weak soap solutions are rapidly fatal to *Treponema pallidum* and gonococci.[9] Soap not only removes viable bacteria from the skin and mucous membrane but actually destroys *T. pallidum*, gonococci, and other pathogenic microorganisms.[10] Its germicidal action against gonococci is equal to that of 0.5 per cent phenol.[11] Soap solutions ranging from 0.1 to 1 per cent kill gonococci within two and a half minutes.[12] The antiseptic value of the soap is increased by the higher temperature of the vagina.[10]

It is apparent that a combination of sulfathiazole with a saponaceous vehicle provides effective venereal prophylaxis and is valuable in treating certain vaginal infections.

THERAPEUTIC APPLICATIONS

In my experience, covering a series of 50 cases, the sulfathiazole-soap applicator has given satisfactory results in the treatment of female gonorrhea and certain other vaginal infections.

In a study [13] of 30 consecutive cases of vaginitis with discharge, the only treatment consisted of two or three uses of the applicator a day without douching. Of these, there was little or no discharge after three days in 16 moderately severe cases and the discharge was controlled in three to five days in 14 patients with moderate to profuse leukorrhea. In the 3 most severely affected patients, the secretion was reduced by about 50 per cent in five days. In all cases the discharge stopped after treatment for two weeks or less. This treatment is effective against the secondary invaders in trichomonal vaginitis because of the broad-spectrum antibacterial action of sulfathiazole. However, this drug is not trichomonacidal and is ineffective against the primary disease.

In dyspareunia due to a small introitus vaginae or vaginismus, preparatory use with the applicator provides gradual dilatation, permits comfortable intercourse, and at the same time protects against venereal infection. In sexual frigidity vaginal lubrication has been shown to have a dynamic effect.[14] In cases of hymenitis or imperforate hymen in newlyweds, the applicator may be used to rupture the hymen or stretch the orifice with full antiseptic protection. It may also be employed as an antiseptic tampon to control hymenal bleeding after rape or rough intercourse.

Treatment produced mild irritation in about 10 per cent of cases, apparently due to hypersensitiveness to sulfathiazole. There were no severe reactions.

SUMMARY

1. The Wandex applicator, with a medicated tip containing 5 per cent sulfathiazole in 2 dr. of stabilized soap, provides convenient and reliable venereal prophylaxis for women.

2. The sulfathiazole and soap combination

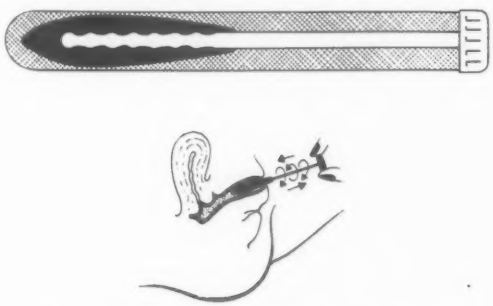

Fig. 2. The applicator is inserted into the vagina in a rotary fashion and withdrawn in the same manner, three to six times.

destroys the *Treponema pallidum*, gonococci, and Ducrey's bacillus.

3. The applications are effective in treatment of certain forms of vaginitis, gonorrheal discharge, and secondary infection accompanying trichomonal vaginitis.

4. The applicator can also be used for dyspareunia due to small introitus vaginae or vaginismus, sexual frigidity, imperforate hymen, and hymenal hemorrhage following sexual trauma.

5. There were no severe reactions. Mild irritation occurred in about 10 per cent of cases.

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Venereal Disease

Despite sharp drops in the incidence of venereal disease since the development of antibiotics, an estimated 60,000 cases of syphilis and 1 million of gonorrhea are still acquired each year, according to the Health Information Foundation. The rate of first admissions to mental hospitals for paresis has also dropped from 4.7 per 100,000 population to 0.5 since the introduction of antibiotics. In spite of such figures, the Foundation concluded, the problems of venereal disease in the United States are far from solved, chiefly because of public apathy and ignorance.

Known and Unknown Cases of Tuberculosis

For every known case of tuberculosis there is one unknown tuberculous person. The total number of known and unknown cases of the disease, both active and inactive, in the United States is estimated at 800,000. For the past five years the percentage of cases discovered in different stages of the disease has remained approximately constant, with only about 22 per cent of the newly reported active and probably active cases in the early stage. In 1956, about 20 per cent of persons who died of tuberculosis had not been previously reported as having the disease, according to "Patterns of Disease."

Medical Briefs

BIOFLAVONOID INHIBITS Rh ANTIBODIES

CVP, a bioflavonoid compound derived from citrus fruit and developed by the U. S. Vitamin & Pharmaceutical Corporation, has been successfully administered during pregnancy to strengthen capillaries and inhibit the production of Rh antibodies.

Dr. Warren M. Jacobs of Baylor University, Houston, Texas, reported in the January, 1960, issue of *Surgery, Gynecology and Obstetrics* of a second study of the subject. His first report was based on treatment of 6 patients, while this second study was completed on 103 patients. The present report compares the results obtained from 71 pregnant women who did not receive CVP, although they were known to have Rh antibodies, with results obtained from 32 patients who, except for the fact that they received CVP, "were otherwise managed identically."

The 32 patients who received CVP produced 24 surviving infants—a success rate of 75 per cent. The 71 patients who did not receive CVP produced 22 surviving infants—a success rate of only 30.9 per cent. Dr. Jacobs commented: "Offhand, these results would seem striking but it must be admitted that the bioflavonoid group is small by comparison and that larger numbers of patients must be treated before more definite conclusions can be reached. Such studies are in progress and future reports will be forthcoming."

SCIATIC NERVE INJURY AFTER INJECTION

Paralysis stemming from injury to the sciatic nerve in 12 children was found to be the result of injections in the buttock. Speaking before the meeting of the Southern section of the American Federation for Clinical Research, Dr. Mollie A. Combes, Instructor of Pediatrics, University of Texas Southwestern Medical School, Dallas, reported on experimental studies indicating that the nerve injury is the result not of the needle but of the substance injected. In laboratory animals, injections of tetracycline and oxytetracycline introduced into the sciatic nerve resulted in nerve injury. Using the same protocol, control animals received sodium chloride solution with no debilitation.

The 12 children studied presented the picture of congenital clubfoot and postpoliomyelitis. In determining the diagnosis, Dr. Combes ran sense perception tests that revealed insensitivity of the sole and dorsum of the foot and the anterior lateral aspect of the leg; cutaneous sweat pattern tests were negative in those areas where there was absence of pain. An operative procedure to obtain direct visualization of nerve injury was necessary in the last 3 patients.

To prevent the possibility of sciatic nerve injury in infants and young children, Dr. Combes suggested that the quadriceps muscle of the mid-anterior thigh should be the site for all intramuscular injections.

EXERCISE LOWERS SERUM LIPIDS

In a report to the Federation of American Societies for Experimental Biology, a team of physiologists of the Howard University School of Medicine, Washington, D.C., found levels of serum phospholipids and cholesterol consistently lower in those persons involved in exercise programs. Blood tests were run on members of Howard's swimming team before and after daily exercise (1 to 2 mile swims) and after competitive meets. The tests showed constant or depressed serum cholesterol and phospholipid levels while exercise was consistent. The team members pursued a diet of 16 per cent protein, 41 per cent fat, and 43 per cent carbohydrates. When the team members went off their diet for the Christmas holidays, serum cholesterol and phospholipid levels rose; they returned to their previous level when the exercise and diet regimen was recommenced.

NOREPINEPHRINE SUPPLY DEPLETED BY RESERPINE

In view of the wide use of reserpine in hypertension and excited psychic states, Dr. Otto Krayer, Professor of Pharmacology at Harvard Medical School, and Dr. Douglas Waud have been conducting experiments to ascertain the action of reserpine on the heart. They have found that reserpine depletes the amount of norepinephrine in the heart muscle, making it difficult for the heart to respond to great fluctuations in blood pressure. As this often is a contraindication to surgical procedure, Drs. Krayer and Waud feel that discontinuing use of reserpine for two weeks prior to surgery would enable the heart to replenish its norepinephrine supply.

World Health Organization

HEAD OF WHO

Dr. M. G. Candau, Director-General of the WHO, accepted the twelfth World Health Assembly's offer to extend his term of office for a further period of three years, beginning July 21, 1960.

INTENSIFIED MEDICAL RESEARCH

Plans for an "Intensified Program of Medical Research," to be carried out by the WHO, have been commended by members of WHO's Executive Board in Geneva. The program was based on recommendations of an Advisory Committee on Medical Research, composed of a number of scientists, each recognized as an authority in his field. Subjects dealt with were malaria, tuberculosis, treponematoses, leprosy, various parasitic infections, virus diseases, insecticide resistance, veterinary public health, antibiotics, cancer, cardiovascular diseases, radiation and genetics, and biological standardization.

High priority will be given to services to research, such as the standardization of nomenclature, techniques, and equipment, to ensure that results from different parts of the world can be compared; setting up reference centers for the identification of microorganisms, tissues, and parasites; and the improvement of communications among research workers and of their training. Next in priority would come demographic studies of the varying incidence of prevalence of diseases and international coordinated research projects that might have a bearing on major WHO programs.

It was pointed out that such research would tie nations together, establishing official contacts among research units that formerly only individuals achieved.

PLAGUE AND CHOLERA IN 1959

The world incidence of plague in 1959 was as low as in 1958, with fewer than 300 cases of human plague officially reported in 11 countries of Africa, the Americas, and Asia (outside continental China), according to the WHO. As for cholera, the number of cases officially reported in Asia was less than half as great in 1959 as in 1958.

Plague. Burma had the highest number of cases; of the 98 cases reported during the year, 36 occurred in four inland urban areas. In India plague was apparently present only in two districts of the southern part of the country. In the north an outbreak (with 15 cases) was reported in a remote mountain area of Himachal Pradesh; this state had apparently been free from plague during the last nine years. In Indonesia the presence of plague (with about 20 deaths) was reported in central Java in March and in December. On the African continent, case of plague were reported in the northeastern part of Belgian Congo and in two districts of the Central Province of Kenya. In the Union of South Africa an outbreak was reported in the Uitenhage District, where plague had apparently been absent since October, 1957. In the Malagasy Republic (Madagascar), only single cases were recorded in five districts of the central plateau area. In the Americas, plague was found in Ecuador and in two provinces of Peru. In Brazil the disease was reported only in one area of the state of Bahia. Three single cases were reported in California and New Mexico.

The presence of plague among rodents was reported during the year in the Belgian Congo and Kenya in Africa; in the United States; and, in Asia, in India (Himachal Pradesh), Indonesia (Central Java), and the town of Hamadan of Iran.

Cholera. The incidence in 1959 was unusually low in India and, in spite of its presence in Thailand and of a considerable rise of the incidence in East Pakistan during October and November, fewer than 42,000 cases were officially reported in Asia as compared with about 95,000 in 1958 and 64,000 in 1957. In India the situation was probably the most favorable on record. Fewer than 14,000 cases were provisionally reported, as compared with 67,000 reported in 1958. About 60 per cent of all cases in India occurred in the lower Ganges Valley. In East Pakistan only 5,300 cases were reported during the first nine months of the year, but a sharp rise occurred in October and reached a peak incidence of about 1,400 cases in the first week of November. According to provisional telegraphic notifications 20,095 cases (with 12,683 deaths) were reported during the year as compared with 16,923 (with 10,541 deaths) in 1958. In Thailand 7,777 cases (with 625 deaths) were reported in 1959, of which 5,073 cases were in Bangkok and Thonburi Province.

President's Message

In my work with the Public Health Service I often see myself as a peripatetic observer and "gossiper." By "peripatetic" I mean merely "wandering," not a disciple of Aristotle; remembering that philosopher's opinion of women in general I hate to think what he would say about a woman physician.

In my wanderings I have seen the development of many exciting programs and services in all parts of the country, activities designed to prevent disability caused by chronic disease. Over and over again women physicians have been the originators of these programs, the prodders, the catalysts, and the persons who got the hospital, the clinic, or the medical or public health school going in this type of work.

I have seen women physicians lead the attack on cervical cancer and glaucoma by organizing community screening programs. I have seen them initiate training programs for M.D.'s and R.N.'s. I have seen them become rehabilitation experts themselves, setting a pace that their male colleagues are hard put to match. We must all strive to live up to the example of these pioneering women physicians and accept the medical challenge of our day—prevention of disability.

When the great honor of serving as president of the American Medical Women's Association came to me, I chose as my theme, "The Prevention and Control of Disability." In my Inaugural Address, which appears in this issue, you will find a general view of this important field of medical practice. It is my hope and expectation that, through the combined efforts of all of us, as individuals and as members of branches of AMWA, we can make a genuine contribution to the solution of this major problem during the next year.

In this critical period the great need is for leadership that will awaken both the medical profession and the lay public to the great opportunities at hand in this relatively new science of prevention of disability. The AMWA is ideally qualified to provide such leadership, and I am convinced that we shall provide it.

Claire F. Ryder M.D. M.P.H.

New AMWA President—1960-1961

CLAIRE F. RYDER, M.D., M.P.H.

A creative talent and a diversity of interests that enrich and vitalize her approach to professional activities characterize the newly inaugurated president of the American Medical Women's Association. From an early career in radio, stage, and MGM and Paramount film productions to her current interests, oil painting, copper ceramics, and boating, Dr. Ryder has consistently applied her talents with relentless success.

As a commissioned officer with the U.S. Public Health Service, which she entered in 1957 as consultant in training and education in the Chronic Disease Program, Dr. Ryder brought to her work an exceptional background of training and experience. Graduated *cum laude* from Radcliffe College and *magna cum laude* from Tufts University Medical School, and with three years of postgraduate training as intern and as teaching and research resident at Boston City Hospital, Dr. Ryder entered the Massachusetts Department of Public Health in 1947. Here she pioneered two significant programs: the first, a pilot study of the distribution and utilization of hospital beds under the first Hospital Survey and Construction Act, and, the second, the establishment and administration of the first State Multiphasic Screening Clinic—later known as the Health Protection Clinic. She was awarded a fellowship at the Harvard School of Public Health, which was completed (again *cum laude*) in 1952. Her appointment to the Harvard Faculty as lecturer in gerontology followed a year later, and she retained this post until her entry into the U.S. Public Health Service, Washington, D. C. Her past academic and dramatic training were here applied with signal success to her responsibilities in program development and teaching.

In her present position as chief of the Section for Health of the Aged, Dr. Ryder has contributed extensively to the development of home care and restorative services throughout the Nation. "With more than 5 million handicapped older people in the United States—and with this number increasing each year," Dr. Ryder says, "it is physically impossible to institutionalize all cases. Early rehabilitation and home care, when suitably provided, are the simplest solutions to this problem. But," she hastens to add, "home care is not the solution to all older persons' needs for medical attention."

Her professional activities require extensive traveling both in this country and abroad. With her vivacity and a temperament that welcomes everything, she carries the unofficial badge of an ambassador of good will.

Where is *le mot juste* to portray the personality or the capacities of an individual who could teach cooking and crafts at an East Boston Settlement House while attending Radcliffe; who could function as anatomy preceptor and work at McLean Hospital while on scholarship at medical school; who could delicately embroider bunny rabbits for my infants' bibs while escaping the fatigues of internship; and who withal became elected to Phi Beta Kappa, AOA, and Delta Omega? With her present busy professional activities, which include significant contributions to the literature of chronic disease processes, rehabilitation, and the aging, Dr. Ryder still finds time to work enthusiastically in oils and ceramics, to collect ivories, and to enjoy her boating and golf.

—Victoria Cass, M.D.

INAUGURAL ADDRESS OF NEW AMWA PRESIDENT

A Modern-Day Challenge—Disability*

Claire F. Ryder, M.D., M.P.H.

THE HONOR OF SERVING as your president is one of the greatest rewards a woman physician can gain in the course of her career, and I shall always be deeply grateful for this opportunity to contribute to the mission of this organization. In my case I feel you have also testified to the value of the public health activities in which I have been privileged to engage for several years.

Of all the many roles the woman physician is qualified to play, none is more suitable or more rewarding than the public health role. Surely nothing I have ever done has brought me such rich yet intangible benefits.

In these days when the problem of recruiting promising young men into public health work is absorbing the best minds of the Public Health Service, I am more and more convinced that one solution must be the recruiting of able young women with medical educations. Recently Dr. Leona Baumgartner, New York City Commissioner of Health, at a luncheon in her honor as "Woman of the Year" of the Women's Medical Association of New York City, expressed this viewpoint. She urged the recruitment of women for medical-care careers to guard against deterioration of quality of care in this age of increasing demands for health services.

In the "old days" a medical career in public health was thought of as a "man's job." But then, what work was not thought of as a man's job in those days? Women were felt to be unsuited for dashing about in quarantine launches or tramping through jungles on the path of tropical epidemics (although, curiously, nurses have been at the male physician's side in every kind of public health job from the very start). The "new era" in public health, however, that official spokesmen so rightly emphasize on every occasion, the era of the chronic rather than the contagious diseases, is custom-tailored for the woman physician.

My own assignment is in the Chronic Disease Program in charge of health activities of aging, and I find, as I travel about the country, that audiences of women are more keenly interested in, more sympathetic about, and better informed on the chronic illness problem than are male groups.

Shakespeare, Byron, and many other poets have outdone themselves in paying tribute to woman as man's chief help in the two extremes of the life span—childhood and old age. Since the entire medical world is focusing on these two periods of prime importance, now, if ever, the woman physician should come into her own.

Almost every activity that the Chronic Disease Program supports in the field of aging will succeed or fail on the basis of the quality of the work done by women. The program is endeavoring to encourage, in co-operation with state and local health departments, medical and other research institutions, and professional and lay community groups, a wide range of services for the aged. Let me mention just a few: nursing homes, organized home

*Presented at the AMWA Annual Meeting on June 11, 1960, in Miami Beach, Fla.

care, and prevention of disability through medical management of the patient at home.

Note that the word "home" occurs in every case. Women are the home experts of the world, whether functioning professionally or individually. Nursing homes are operated principally by women, which is, perhaps, why they are called homes and not "geriatric depositories" or some other masculine synonym. An organized home care program leans heavily on the nurse, the social worker, the physical or occupational therapist, the nutritionist (all usually women), and on the "woman of the house." And the woman of the house, normally the responsible companion of the patient, is entrusted with the regimen of simple procedures that can prevent disability.

If the woman physician is missing from this "cluster" of services, I say she is conspicuous by her abence. She belongs in the chronic disease field, which is increasingly concerned with our older citizens.

In the area of chronic disease and aging the greatest problem is that of disability—and its prevention provides the greatest challenge. I have already alluded to the possibility of preventing disability through medical management, through the efforts of all practicing physicians and coworkers. This is why the whole field seems to me such a genuine "challenge."

You cannot work in the chronic disease area without being impressed (yes, and depressed) with the great amount of preventive work that has been postponed because the etiology of specific diseases has not been established. Both medicine and public health seem to be waiting until research tells us more about the causes of various forms of heart disease and cancer before we can take decisive action to prevent the occurrence of these conditions. Even the accident prevention experts—and accidents are the fourth greatest killer nowadays—admit that they really do not know why we insist on making so many accidents for ourselves. "Behavioral research is the key," they whisper wisely.

Of course there are, nevertheless, many types of primary prevention that are possible at this time. One specific action we can all take, right in our own communities, is to work for fluoridation of the water supply. This is dramatic primary prevention; it will prevent dental decay among the oncoming generation. Yet many of our communities are delaying action.

But the prevention of disability, or "secondary prevention," is possible *now*. We do know right now how to go about preventing the disabling sequelae of certain chronic diseases and conditions. For example, while we cannot prevent all automobile accidents there are steps we can take to reduce the severity of injuries caused by these accidents. We can install and use automobile seat belts. Last year, it is estimated, over 5,000 people were killed because they were thrown from cars in accidents; seat belts could have saved these lives. As you know, the Association is developing a project in the field of motor vehicle accident prevention. In the meantime, let us all make sure that our own cars are equipped with seat belts.

Screening for such diseases as glaucoma, diabetes, and cervical cancer is one of the major contributions of recent years to the cause of secondary prevention. By finding such conditions early, treatment occurs at a time when the disease is most amenable to therapy, when subsequent disability can be prevented.

Early detection of glaucoma will save the eyesight of thousands of people in this country annually. And, as you know, there are now simple and efficient screening tools and techniques for this purpose. Tonometry can and should be made a routine part of periodic health examinations conducted in the physician's office, or it can be carried out in the hospital or clinic setting. It should, in any event, be made as nearly universal as possible.

Blood testing for diabetes is an equally valuable screening device that is now highly efficient and simple to do. Again, early detection of diabetes may prevent the amputation of a limb or other results of the advanced stage of the disease.

But most important of all in the prevention of disability is what the physician herself can do through early intensive medical management of patients with chronic illness. Physicians, working in hospitals or in patients' homes, can apply prompt medical care to minimize the aftereffects of strokes, arthritis, fractures, diabetes, cardiovascular diseases, and other chronic illnesses.

It has been estimated by some clinicians that at least half of all disability is caused by immobilizing the patient—by placing him in bed—rather than by the disease itself. We all

remember that one of the brightest chapters in the medical history of World War II was the success that followed early mobilization after surgery or accident. Some years ago an experiment that involved immobilizing healthy young men in plaster casts for six weeks produced disabilities of many types, some of which (stiffening and soreness of the joints, for example) persisted for weeks after the casts had been removed.[1] Distinctive emotional reactions were noted in this study, incidentally, of the sort usually described as "part of the disease." If this can occur with healthy young men, it is not hard to visualize what effect immobilization has on the older and chronically ill individual.

In an article written over 13 years ago[2] Asher points out that "beneath the comfort of the blanket there lurks a host of formidable dangers." He concludes by paraphrasing the old hymn—

> Teach me to live that I may dread
> The grave as little as my bed—

into advice for all physicians as follows:

> Teach us to live that we may dread
> Unnecessary time in bed
> Get people up and we may save
> Our patients from an early grave.

To sum up, we now know that the former differentiation between the acute phase and the rehabilitation phase in the medical management of disease or injury was a false differentiation. We now know that time is of the essence. Bauer,[3] of the PHS, in a recent address at the Iowa Public Health Association meeting, pointed this fact out clearly in describing a study of stroke patients at the Kansas City Rehabilitation Center. Half of the patients in the group studied were given no exercise until one week after their strokes had occurred. The other half were started on exercises in 24 hours. In the first group 75 per cent of the patients became ambulatory, whereas in the second group 90 per cent became ambulatory. We now know that restorative efforts must begin as soon as possible if disability is to be prevented or postponed for a long time. Early ambulation, combined with simple active and passive exercises, can produce apparent miracles either in the hospital or at home.

Two years ago the PHS decided to publish a booklet that physicians could give to the families of stroke patients to help them in the care of these patients.[4] As he would write out a prescription, the physician was to check exercises in the book and guide the patient and his family in the proper use of this information. Almost immediately the PHS realized that it had a best seller. Within a few months over 100,000 copies had been distributed to physicians for use with stroke patients; some were given out by the PHS or by state and local health departments, but the majority was sold by the U.S. Superintendent of Documents.

The Chronic Disease Program, which planned and produced the booklet, is naturally proud of its success but is much more concerned with the implications of its popularity. It is believed that this phenomenon proves the great need for authentic and usable material on the prevention of disability and that the private physician is eager for this type of material. The format of "Strike Back at Stroke" appears to be as well adapted to professional as to lay health education purposes, since many leading medical schools have used the booklet for instructing medical students. This demonstrates the high value attached to the prevention of disability by the leaders of the medical profession today.

The PHS is now preparing to publish a companion piece, called "Strike Back at Arthritis," designed to help the physician bring into the homes of arthritics the same type of simple but essential restorative services that have aided so many stroke victims. The American Medical Association has endorsed the presentation of this material, and the Arthritis and Rheumatism Foundation is collaborating in the publication. Over a million people are disabled by arthritis. We hope the new booklet will help to keep this figure from growing greater.

Publication is, of course, just the first step. There must be follow-up—that vital factor in any public health program—to find out how the booklets are used, what the results obtained are, and what methods can be used to maximize the value of the project.

In many parts of the country "Strike Back at Stroke" has been put to work. The Medical Society of Montgomery County, Maryland, for example, approved the sending of copies of the booklet to every physician in the county. The health department co-operated by making available the services of three public health nurses, trained in rehabilitation nurs-

ing, and a physical therapist. Every physician in Montgomery County can now make use of two new weapons to fight disability in stroke cases—the booklet and the professional personnel to follow the booklet into the home and help it get results.

In Georgia a co-operative state-wide project has been developed to give clinical training to physicians, nurses, and nursing aides in the techniques of rehabilitation. The Georgia State Medical Society, the Georgia State Health Department, the Georgia Heart Association, and the Georgia Academy of General Practice are all putting their shoulders to the wheel so that stroke victims can receive needed services in nursing homes, in their own homes, and in hospitals.

The PHS hopes to achieve a more systematic and complete follow-up with the arthritis booklet than has been possible with the stroke booklet. These publications are tools, and good tools, but they must be effectively used. The PHS must constantly discover or evolve better ways to make these tools serve hundreds of thousands of patients throughout the country.

The PHS looks to organizations like this one to help in this enterprise. Possibly a project for this Association in the coming year could be an evaluation of the prevention of arthritic disability through the use of this booklet.

Women do not discard the practicality of their sex when they acquire M.D. diplomas, and practical advice is what the PHS is looking for right now—not specialized consultation or literary criticism. It needs practical reports on dozens of different examples of the effective utilization of the arthritis booklet; it needs hundreds of reports on the outcome of utilization, in terms of patient improvement and of disability prevented or ameliorated. It needs your help.

I look forward to serving you in the months ahead to the best of my ability. It is a great source of pride to be honored with this token of your confidence at a time when women physicians have the greatest opportunity to prove their worth. We are indeed living in the "chronic disease era," and the special aptitudes of women—including patience, compassion, and intuitive understanding—equip them to make the best possible use of their medical training in dealing with the complexities and discouragements of chronic illness.

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MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

1962 General Assembly 1963 — Manila, the Philippines

The General Assembly of the MWIA will be held late December, 1962, and early January, 1963, in Manila. The Executive Committee of MWIA would like to know approximately how many members will attend from each country. If you are interested in attending this meeting, please write the undersigned at once and indicate whether you are reasonably sure of going as of now. We realize that unforeseen events may occur in the interim and may necessitate a change in plans, but it would be helpful to know of your interest.

In connection with this meeting, there will be a Post-Assembly Tour through the Far East, possibly Around-the-World, which will be arranged by Ada Chree Reid, M.D., who has traveled extensively through this area and has many contacts. A very interesting trip can be anticipated.

Since we would like to give a tentative report to the Executive Committee at the Baden-Baden meeting in September, your immediate reply will be helpful. Write Alma Dea Morani, M.D., National Corresponding Secretary, 3665 Midvale Ave., Philadelphia 29.

Of Special Interest

CERTIFICATION OF FOREIGN PHYSICIANS

Dr. Edwin L. Crosby, Director of the American Hospital Association, announced on May 3 that hospitals employing graduates of foreign medical schools who fail to meet certain requirements will face action by the AHA.

As of Dec. 31, 1960, the AHA will cease listing hospitals employing foreign medical graduates in patient-care situations who have not been certified by the Educational Council for Foreign Medical Graduates. An explanation of the ruling appears in a question-and-answer pamphlet now being mailed by the AHA to all member hospitals.

The AHA ruling follows that of the AMA, which has stated that it will withdraw approval of internships and residencies in hospitals employing foreign graduates after July 1, unless the appointee meets one of the following requirements: possesses a full and unrestricted state license to practice; is in the final six months of training; possesses full or temporary certification from the Educational Council; or has been given a six month appointment contingent on passing the Sept. 21, 1960, examination by the Educational Council.

Considerable controversy has arisen in the last year regarding the use of foreign graduates in American hospitals. The AMA and AHA rulings are an attempt to ensure high standards of patient care in hospitals.

Those who are exempt from certification include foreign graduates who are not in situations where they give direct care to the patient, as in research, and graduates of Canadian and Puerto Rican medical schools, who are considered to be graduates of American schools.

WHITE-COLLAR AND CAREER WOMEN

Women at Work. Facts on Women Workers, published by the Women's Bureau, U.S. Department of Labor (April, 1960), presents the employment picture for women in this decade. According to the Bureau of the Census and the Bureau of Labor Statistics, the number of women workers will increase by 6 million, reaching a total of 30 million by 1970. A rise in employment in the 45 to 54 year age group is anticipated, as more women will be entering or re-entering the labor force after their children are grown.

The number of women engaged in part-time work is expected to reach 16 million. Because of the nature of the workers needed on this basis—sales clerks, beauty operators, teachers, librarians, nurses (registered and practical), and social workers—women will supply the major portion needed; they presently account for 60 per cent of this country's part-time labor force.

An increase is anticipated not only in the number of women working and in the number of white-collar jobs available but also in training and education requirements for all jobs. The number of bachelor and postgraduate degrees earned by women is expected to almost double during the next 10 years.

Preparation for Career. There seems to be a lack of awareness on the part of vocational guidance counselors and on the part of the female students in the high schools and colleges as to the scientific fields open to women. To fill this need, in part, the Department of Labor has published "Careers for Women in the Physical Sciences," Women's Bureau Bulletion no. 270, 1959, which is available for 35¢. Opening with a chapter Science and Womanpower, the bulletin then describes educational preparation in general and summarizes the fields of chemistry, physics, geology, astronomy, and metereology, including the education necessary in each field, the specialties and opportunities within each field, those aspects peculiar to a given field (such as irregular hours in certain types of research and special physical capabilities as might be needed for particular types of geological work), and the salary that can be expected in a chosen field. Illustrative cases are presented for each field and the pamphlet is generally highlighted with photographs.

To fill the need in the area of medicine, AMWA published the pamphlet, "So, you want to be a Doctor?" for high school girls. The response of guidance counselors and students throughout the country has reassured us that there is a definite need for diffusion of such information. In an informal style, this pamphlet attempts to answer the questions of preparation for a medical career, the costs involved in attaining this, and the satisfactions of

medical practice. A similar pamphlet for the girl in college is being prepared and will be published later this year. A third on the medical specialties will soon be available.

Earlier this year, Mrs. Alice K. Leopold, Assistant to the Secretary of Labor, said: "Perhaps we in the United States are fortunate that so many women have or are working toward college degrees. When there are shortages such as exist in the scientific professions, these educated women can, with special training, go to work where they are needed . . . Advancement in this field [*science*] depends on experience and education. And there are many rewards. Not only do women entering the scientific fields get higher salaries than women going into most other fields, but they can gain great satisfaction from being able to develop ideas—to be creative—to realize accomplishments that will make their lives exciting and satisfying."

TUBERCULOSIS

The tuberculosis program of the U.S. Public Health Service and the National Tuberculosis Association sponsored the Arden House Conference on Tuberculosis, held Nov. 29-Dec. 3, 1959, in Harriman, N. Y. The recommendations of the Conference have been published in a booklet, "Treatment Is the Tool." Treatment is drug therapy, and it is hoped that it will virtually wipe out tuberculosis in this country. The approach is mainly to make sure that all patients receive adequate treatment so that the incidence of reinfection is reduced. Isoniazid was reported by the USPHS and the Veterans Administration as the drug of choice, either alone or in combination.

It was pointed out at the Conference that there are whole communities and in some instances almost whole counties where tuberculosis has been virtually eliminated. Rarely is this opportunity of attaining a nationwide control over the disease encountered, nor will this opportunity last forever. In foreign countries drug therapy is cautiously administered because it is feared that widespread use might encourage the production of drug-resistant strains of the tubercle bacillus.

The Conference also urged integration and co-ordination of collecting data, as health officers are often handicapped by not having prompt and accurate reports on all cases. Physicians apparently are not reporting cases as they occur, active or passive.

THESE WERE THE FIRST

DR. ALIDA C. AVERY (1841-1918), a graduate from the New England Female Medical College in Boston in 1862, and from the Boston University School of Medicine, was a pioneer woman physician in San Jose, Calif.

DR. ADELHEID BEDAL (1860-1945) of St. Louis, a graduate of the Woman's Medical College of Pennsylvania in 1891, was physician for the Night and Day Camp, established by the St. Louis Tuberculosis and Health Society, and for many years was with the Chest Clinic at Washington University. With Drs. Mary McClean, Ella Marx, and Francis Bishop, Dr. Bedal conducted a free clinic for women in St. Louis. Their applications for membership in the St. Louis Medical Society were denied until they signed them with only initials of their first names.

DR. RUTH BENSUSAN-BUTT (1877-1957) was the first woman physician in Colchester, England, where she practiced for 44 years, and the first woman physician to win a municipal election—as Labour Councillor and Alderman (1922-1950) in her city. She operated the first day nursery in her city, and was founder-president of the Business and Professional Woman's Club of Colchester.

DR. CLARA HAMMOND MCGUIGAN of Philadelphia was graduated from the Women's Medical College of Pennsylvania in 1887 and practiced in Harrisburg for many years. For 27 years she was physician and superintendent at the Mystic Oral School for the Deaf in Connecticut, and with her husband, Dr. John T. McGuigan, adopted six children, four of them students at the school.

DR. JULIA E. MARCHANT (1855-1929) of Rome, N. Y., graduated in 1877 from the medical department of the University of Michigan and the following year obtained a license to practice in Oneida County, New York. In November, 1893, she came on the first excursion train to Texas and until her death practiced as a "country doctor" in La Porte. Much of her services was done for charity and often her calls were made by foot when muddy roads were impassable for vehicles.

—From the ELIZABETH BASS Collection,
Rudolph Matas Medical Library,
Tulane University, New Orleans.

Opportunities for Women in Medicine

AWARDS

Surgery. The Samuel D. Gross Fund prize of $1,500 will be awarded to the author of an original paper, not more than 150 pages in length, on an aspect of surgical pathology or surgical practice that has come out of original work on the physician's part. Only citizens of this country are eligible. The award will be made by the Philadelphia Academy of Surgery. Manuscripts must be submitted no later than Sept. 1 to Dr. George P. Rosemond, Chairman, Samuel D. Gross Fund, 3401 N. Broad St., Philadelphia 40.

COURSES

Gastroenterology. The American College of Gastroenterology has announced its Annual Course in Postgraduate Gastroenterology, to be offered Oct. 27-29 at the Bellevue-Stratford Hotel in Philadelphia. The course will cover the advances in diagnosis and treatment of gastrointestinal diseases, with a thorough discussion of diseases of the gastrointestinal tract; there will be a clinical session at the Albert Einstein Medical Center, a panel discussion of interesting clinicopathological conferences, and presentation of individual papers. Further information and applications may be obtained by writing to the College, 33 W. 60th St., New York City 23.

Prosthesis. The New York University Post-Graduate Medical School will offer a series of two week summer courses in prosthetics in co-operation with the International Society for the Welfare of Cripples. These courses will constitute the Third International Prosthetics Course sponsored by the Committee on Prosthesis, Braces, and Technical Aids of the ISWC. The course for physicians and surgeons, to be given Aug. 15-26, includes principles of biomechanics, fabrication, fitting, alignment, suspension, harnessing, prescription, and evaluation of lower and upper extremity prostheses; surgical techniques, prosthetic components, performance analysis, and training are also included. Further information and applications can be obtained by writing Dr. Sidney Fishman, Director, Prosthetics Education, NYU-Post-Graduate Medical School, 342 E. 26th St., New York City 10.

FELLOWSHIPS

Alcoholism. The Scientific Advisory Committee of the Licensed Beverage Industries, Inc., has announced a new grant-in-aid program through which relatively small research grants may be arranged quickly for competent scientists working in the field of alcoholism and related subjects. LBI is making this program possible, in response to the growing need for more scientific information, through a grant of $500,000 during a five year period. Grants will be awarded to qualified researchers and to young scientists in the biological and behavioral sciences who wish to make preliminary or pilot studies for the purpose of raising or clarifying promising hypotheses. Stipends will range from $2,000 to $10,000 for one year and may be renewed. Recipients will have complete freedom of operation. Applications should be made to the Scientific Advisory Committee of the Licensed Beverage Industries, Inc., 155 E. 44th St., New York City 17. Notification of acceptance will be made 90 days after receipt.

Heart Research. Applications from research investigators for support of studies to be conducted during the fiscal year beginning July 1, 1961, are now being accepted by the American Heart Association. Stipends in all categories have been increased this year, based on the rising cost of living. Established investigatorships are usually awarded for five years, are subject to annual review, and are awarded in amounts ranging from $7,500 to $9,900 yearly, plus dependency allowance, to scientists of proved ability who have developed in their research careers to the point where they are independent investigators. An additional grant of $500 is made to the investigator's department to assist in defraying the expenses of his research program. Applicants may apply for grants-in-aid to support their research at the same time they apply for established investigatorships. Advanced research fellowships are awarded for periods of one or two years to postdoctoral applicants who have had some research training and experience but who are not clearly qualified to conduct their own independent research. During the second year of tenure they will be permitted to spend up to 25 per cent of their time in professional

and scientific activities not strictly of a research nature, provided that these will contribute to their professional development and will not involve services for a fee. These stipends range from $5,500 to $6,000 annually. plus dependency allowance. As in the case of established investigators, an additional grant of $500 is made to the investigator's department. A limited number of research fellowships are available to young men and women with doctoral degrees for periods of one or two years, to enable them to train as investigators under experienced supervision. Annual stipends range from $4.000 to $4,500, plus dependency allowances. This type of award, however, is primarily made by local heart associations. Grants-in-aid will be made to experienced investigators to help underwrite the costs of specified projects, such as equipment, technical assistance, and supplies. Further information regarding research awards and application forms may be obtained from the Assistant Medical Director for Research, American Heart Association, 44 E. 23rd St., New York City 10. Applications for research fellowships and established investigatorships must be made by Sept. 15; for grants-in-aid the deadline is Nov. 1.

LOANS

Obstetrics and Gynecology. The American College of Obstetricians and Gynecologists has set up a Higher Education Loan Program (HELP) to enable resident physicians to complete their training in obstetrics and gynecology. Loans up to $5,000 will be made to help physicians through their specialty training period and early practice. The College and its district organizations has contributed the initial working fund of $36.000, which will be added to through individual contributions and grants, if necessary. Information can be obtained from Mr. Donald F. Richardson, Executive Secretary, The College, 79 W. Monroe St., Chicago 3.

MEETINGS

AHA. The American Hospital Association will hold its meeting in the Civic Auditorium, San Francisco, Aug. 27-Sept. 1. Write to Mr. Maurice J. Norby, 18 E. Division St., Chicago, for further information.

Blood Banks. The American Association of Blood Banks will meet at the Jack Tar Hotel, San Francisco, Aug. 21-26. Interested physicians should contact the AABB Central Office, Suite 1619, 30 N. Michigan Ave., Chicago 2.

Chemical Organization of Cells. The Conference on the Chemical Organization of Cells: Normal and Abnormal will convene Aug. 25-27 at the University of Wisconsin, Madison. Information can be obtained from Dr. J. F. A. McManus, Department of Pathology, University of Alabama Medical Center, Birmingham.

Gerontology. The Gerontological Society, Inc., will convene Aug. 7-12 at the Mark Hopkins Hotel, San Francisco. For information write to Mrs. Marjorie Adler, 660 Kingshighway Blvd., St. Louis 10.

Hypnosis. The American Society of Clinical Hypnosis will hold its meeting Aug. 7-10 in Miami, Fla. Contact Dr. Seymour Hershman, 6770 Lincoln Ave., Chicago 46, for information.

Ophthalmology. The Asia Pacific Academy of Ophthalmology will hold its first congress Oct. 10-13. The congress will meet in Manila and will be held under the auspices of the Philippine Ophthalmological Society. The theme of the congress is "Blinding Diseases of the Asia-Pacific Regions." Details can be obtained from Dr. Jesus V. Tamesis, Executive Chairman, 42 Quezon Blvd., Quezon City, Philippines.

Photography. The Biological Photographic Association, Inc., will meet at the Utah Motor Lodge, Salt Lake City, Utah, Aug. 23-26. For further details write to Miss Jane H. Waters, Box 1668, Grand Central P.O., New York City 17.

Physical Medicine. The American Congress of Physical Medicine and Rehabilitation will convene Aug. 21-26 at the Mayflower Hotel in Washington, D. C. For information write to Mrs. Dorothea C. Augustin, 30 N. Michigan Ave., Chicago 2.

Physiology. The American Physiological Society will meet at Stanford University, California, Aug. 22-26. Interested physiologists should contact Mr. Ray G. Daggs, 9650 Wisconsin Ave., Washington 14, D.C.

News of Women in Medicine

DR. CARROLL L. BIRCH, Professor of Medicine at the University of Illinois College of Medicine, is a member of the committee to select the fellows who will participate in the Smith Kline & French Laboratories' Foreign Fellowship Program for medical students.

DR. MARIAN BOUGHER, 84 years old, and her 93 year old husband, Dr. William, of Chicago, were cited as the oldest practicing husband-wife team in Illinois. They have been practicing together for 48 years. Their picture appeared in the April 18 issue of *AMA News*.

DR. RUTH M. GRAHAM and her husband, Dr. John, of the Roswell Park Memorial Institute in Buffalo, N.Y., were mentioned in *Medical News* Jan. 13. The couple are engaged in research concerning a virus theory for the cause of cancer. Despite the handicap of allowing only patients in the terminal stages of the disease to receive untested therapy, the Grahams have developed a vaccine and have had "some degree of success." A picture of the couple accompanied the article.

DR. PHYLLIS GREENACRE, a psychoanalyst in private practice and on the teaching staff of New York Psychoanalytic Institute and the Department of Psychiatry of New York Hospital and Cornell University Medical College, was featured in the Medical Distaff column of *Scope Weekly* on Oct. 21, 1959. Dr. Greenacre was the 1959 recipient of the Charles Frederick Menninger award, granted for her over-all contributions to the theory and practice of psychoanalysis. She was also noted as the author of "Swift and Carroll," an analytical study concerned with these authors' use of distortion of body images. Dr. Greenacre believes that study of the artistic personality may hold the key to an understanding of the creative process.

The local faculty of the forty-fourth session of the Trudeau School of Tuberculosis and Other Pulmonary Diseases, 1959, included DR. OLGA R. HOFFMANN, Instructor of Pediatrics, New York University, and Ward Physician, VA Hospital, Sunmount, N.Y., and DR. MARGUERITE KINGSBURY, Acting Assistant Chief, Pulmonary Disease Service, VA Hospital, Sunmount, N.Y. The guest faculty included DR. LYDIA B. EDWARDS of the Tuberculosis Program, Division of Special Health Services, U.S. Public Health Service, Washington, D.C.; DR. JULIA M. JONES, Visiting Physician, Chest Service, Bellevue Hospital, and Associate Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York City; and DR. EDITH M. LINCOLN, Adjunct Professor of Pediatrics, New York University Medical School, and Visiting Physician, Children's Medical Service, Bellevue Hospital, New York City.

DR. HAZEL LIN, an obstetrician and gynecologist in Jersey City, N. J., was featured in the Doctors' Diversions column in the *AMA News*, Nov. 2, 1959. Dr. Lin is the author of two books, "The Physicians" and "The Moon Vow," published in 1951 and 1958 respectively. A third book will be published this year. Dr. Lin was graduated from China Union Medical College in 1935, valedictorian and the only woman in the class. She did postgraduate work at the University of Michigan, where she met her husband, a chemical engineer. She has two sons, a thriving practice, and a literary career. She stated: "Sleep to me is a waste of time. I need only two or three hours."

Presently in her first year of internship, 48 year old DR. ELDA CLAYTON PATTON was featured in a column in the *New York Journal-American* Jan. 26. Titled "The Courageous Dr. Patton," the article outlined her medical career and reported Dr. Patton's plans for the future. She intends to specialize in psychiatry.

DR. JACQUELIN PERRY, an orthopedic surgeon at Rancho Los Amigos Hospital, Downey, Calif,, was the surgeon responsible for the successful operation described in the article, "Why Dana Buxton Smiled," which appeared in *The Saturday Evening Post* April 9. Dr. Perry works with Dr. Vernon Nickel, who has perfected spinal fusion operations for postpoliomyelitic patients with severe loss of resiratory function.

Book Notices

Editor's Note: These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.

CLINICAL DERMATOLOGY FOR STUDENTS AND PRACTITIONERS. By Harry M. Robinson, Jr., M.D., Professor and Head of the Division of Dermatology, University of Maryland School of Medicine, and Chief Dermatologist, University Hospital, Baltimore; and Raymond C. V. Robinson, M.D., Associate Professor of Dermatology, University of Maryland School of Medicine, and Assistant Chief of the Dermatology Clinic, University Hospital. Pp. 242, with 117 figures. Price $8.50 (cloth). The Williams and Wilkins Company, Baltimore, 1959.

This is an excellent book, with each disease discussed clearly and concisely in outline form. It begins with a general background, which includes anatomy, physiology, allergy, mycology, and therapy. The various diseases are discussed under regional involvement and morphologic groups. Liberal use is made of charts and tables, which further clarify the subject. Clearly written and well illustrated, this should be a valuable book for both medical students and practitioners. It is also helpful as a guide to further study in larger texts.

—Eva Brodkin, M.D.

CANCER OF THE BREAST. Compiled and Edited by Willard H. Parsons, M.D., F.A.C.S., Chief of Staff and Director of Surgery, Vicksburg Hospital and Clinic; Senior Consulting Surgeon at Kuhn Memorial Hospital; Attending Surgeon, University Medical Center; and Clinical Associate Professor of Surgery, School of Medicine, University of Mississippi. Foreward by Warren H. Cole, M.D., F.A.C.S. Publication no. 355, American Lecture Series. A monograph in The Bannerstone Division of American Lectures in Surgery. Pp. 232, with illustrations. Price $7.50. Charles C Thomas, Publisher, Springfield, Ill., 1959.

Cancer of the breast is undoubtedly one of the more difficult problems the physician today must face in her practice. This book is an excellent overall review of the subject covering the anatomy, physiology, and pathology of the breast as well as the available modalities of treatment, both surgical and medical. It covers all sides of controversial problems, especially the aspects of treatment regarding radiation and superradical surgery. Even the questions of "what" and "how much" to tell the patient are discussed.

The book is written in an easily readable style that is concise and to the point. The print used is large, clear, and legible, making it easy on the eyes. The book is not profusely illustrated but the illustrations present are ample and effective.

Dr. Parsons has written four of the chapters himself and has chosen other equally renowned authors for the other chapters.

This book is especially valuable to the general surgeon and surgical resident, but it deserves a place on the shelf of any physician who must face the problems this pathological entity presents.

—Christine E. Haycock, M.D.

THE TRIUMPH OF SURGERY. By Jürgen Thorwald. Translated from the German by Richard and Clara Winston. Pp. 454, with illustrations. Price $6.50 (cloth). Pantheon Books, Inc., New York, 1960.

The nineteenth century, a time of political ferment, was also characterized by the rapid growth of surgery. After the discovery and application of anesthesia and antisepsis, surgery became more than mere excision of external morbid tumors, amputation of gangrenous limbs, or the suturing of traumatic wounds. The surgeon was trained to operate at high speed to reduce the inevitable pain and shock. He became inured to the knowledge that incising the peritoneum usually spelled death by sepsis. At a stroke these twin specters were routed. The adventurous operator envisioned entering the cranial cavity, invading the pulmonary cage, and, who knows, possibly attacking even cardiac lesions.

The original reports of the first steps taken along this new path are available to us in our older medical libraries. Had we but the time, and incidently the money, we could delve into the past, writing our own medical history. Since most of us cannot, we can be thankful that this has been done for us by Thorwald in "The Triumph of Surgery." The author uses the format of the television production "You are there." His narrator, Henry Steven Hartmann, is sufficiently financially endowed so that he may travel to England and visit Hughlings Jackson, Bassini in Italy, Sauerbruch in Germany, and many others. Through him we listen to their hopes, learn of their fears, join in their disputes, and are seized by the anxiety that surrounded the early procedures.

Altogether this is a most interesting book and highly recommended. The print is clear and the illustrations well reproduced. Richard and Clara Winston are to be complimented on their excellent translation. The author has increased the value of the book immensely with a complete index and an extensive bibliography for the reader interested in further research or information. Every physician should have "Triumph" in his bookshelf.

—Léon E. Mermod, M.D.

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(Continued on page 701)

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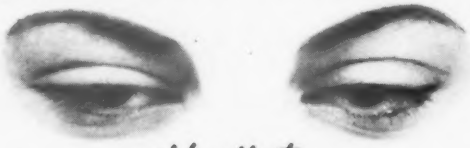

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(Continued on page 702)

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(Continued from Page 701)

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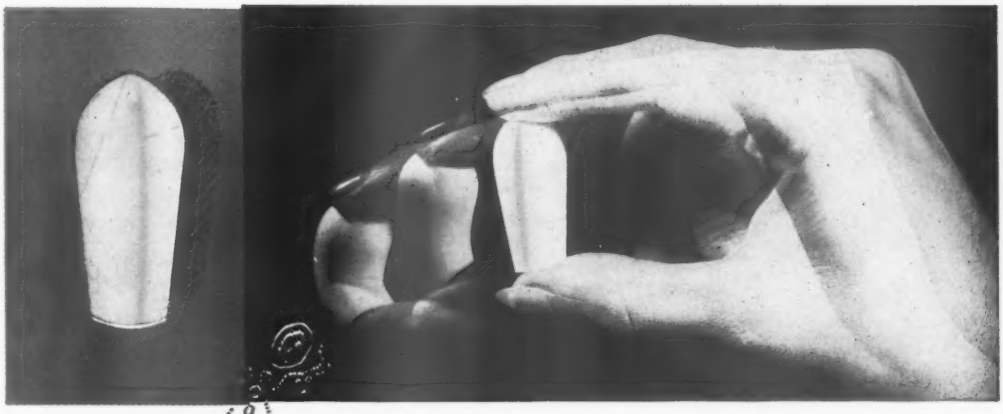

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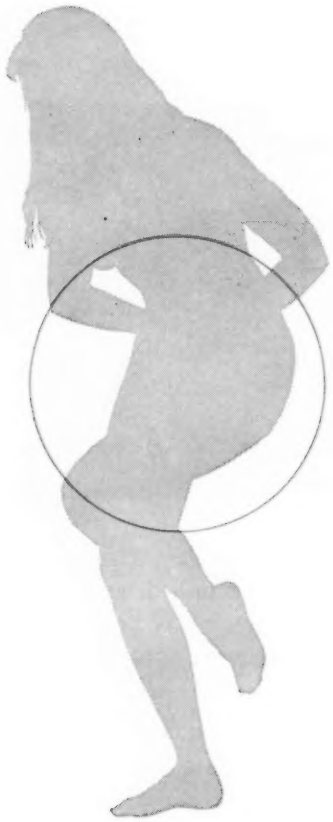

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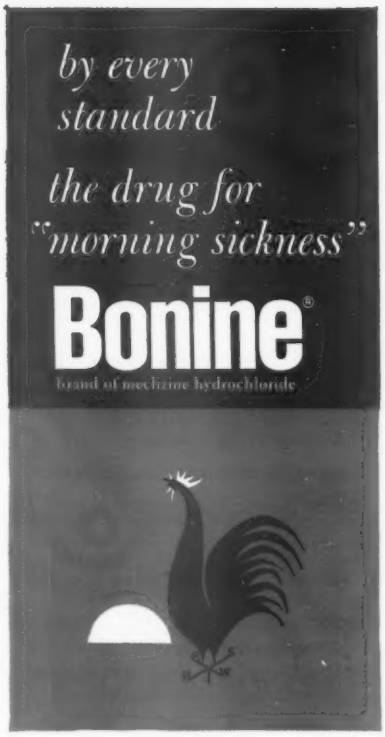

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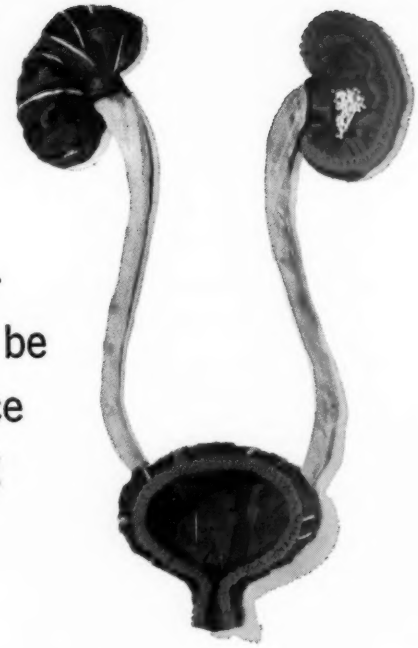

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1. Randall, L. M. 2. Reich, W. J., Rubenstein, M. W., Nechtow, M. J., and Reich, J. B. (literature available on request).

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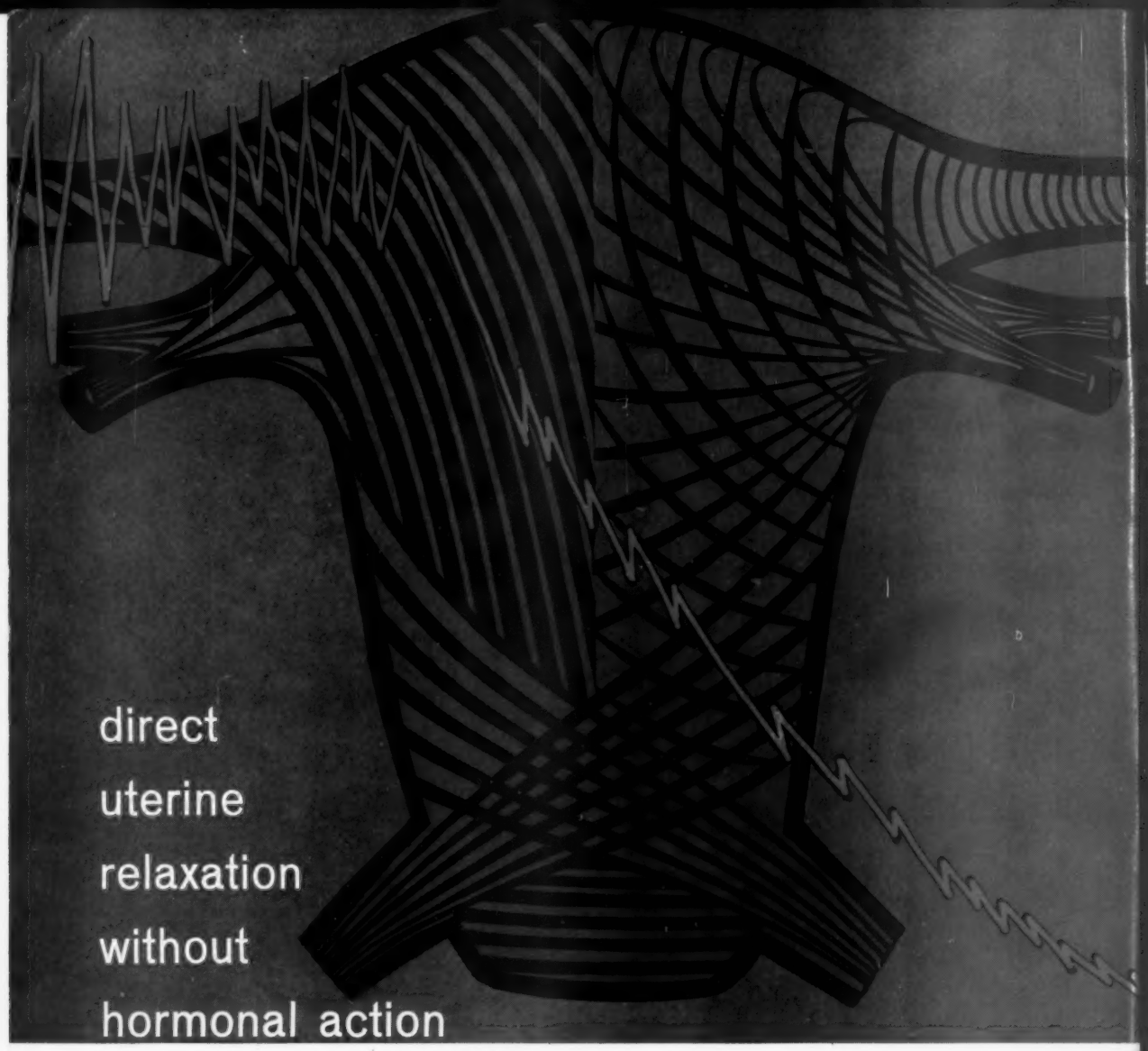

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